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TRANSACTIONS

OF THE

TWENTY-SEVENTH SESSION

OF THE

American Institute of Homœopathy,

HELD AT NIAGARA FALLS, N. Y., JUNE 9, 10, 11, AND 12, 1874.

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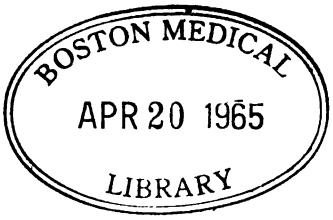

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PREFACE.

THE publication of the Transactions of the Twenty-seventh Session of the Institute has been delayed by a combination of circumstances, which, while they are greatly regretted, could not have been controlled.

The valuable papers of the *Committee on Climatology*, referred to on page 611 of Section I as forming a part of Section XIII, were omitted on account of the great bulk the volume had attained before they were reached, and because it was thought that they could be more appropriately published next year with the papers of the Bureau of General Sanitary Science and Climatology, which will constitute Section XIII.

Submitted in behalf of the Committee of Publication.

ROBERT J. MCCLATCHEY,
General Secretary.

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AND

MISCELLANEOUS PAPERS

OF THE

TWENTY-SEVENTH SESSION

OF THE

American Institute of Homœopathy.

VOLUME II. NUMBER 4.

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W. H. WATSON, M.D.....UTICA, N. Y.

XXXII.

PROCEEDINGS

OF THE

TWENTY-SEVENTH SESSION

OF

THE AMERICAN INSTITUTE OF HOMŒOPATHY.

HELD AT NIAGARA FALLS, N. Y., JUNE 9, 10, 11, 12, 1874.

PRELIMINARY MEETING.

THE "preliminary meeting" was held in the parlor of the International Hotel, on Monday evening, June 8th. The meeting was largely attended, and was characterized by the utmost good feeling, the exchange of cordial greetings and expressions indicating the anticipation of a pleasant and profitable session.

FIRST DAY.

The Institute convened in Grant Hall, on Niagara Street, at 9 o'clock A.M., and was called to order by the President, J. J. YOULIN, M.D., of Jersey City, N. J.

The President announced the *Order of Business*, arranged by the Executive Committee, which was, on motion, unanimously adopted.

ANNUAL ADDRESS.

THE PRESIDENT then delivered the Annual Address, as follows:

FELLOW-MEMBERS OF THE AMERICAN INSTITUTE OF HOMŒOPATHY: At the close of the last annual session of this Institute, your suffrage placed me in a position of trust and honor not exceeded by any other in our profession, either in this or any other land.

I am grateful for this exhibition of your confidence and esteem; yet I approach the duties of presiding over this Convention with a feeling of timidity and of earnest solicitude, proportionate to the responsibilities of the situation. But relying upon you to support me in carrying out the rules and regulations calculated to enhance the harmony and expedite the business of the session, I promise you my best efforts and constant care.

While I shall endeavor to be governed alone and strictly by the rules of order and debate that direct all legislative bodies, I may often err in judgment and in ruling, and I therefore bespeak your patience and consideration. With these desires and with kindly wishes, I greet you to-day with hearty welcome to this place and session, trusting that you may not only derive rest, physical strength and real pleasure, but mental and professional advancement. You have left your fields of labor and care, to spend a little time with your brethren in that field of usefulness which is to develop good to us all and give an impetus to homœopathy. I trust that we have gathered here, not to subserve some peculiar interest of our own, but to develop that in our profession which will be for the good of the mass. Let the majesty and grandeur of the river upon whose banks we have assembled, inspire us with the grandest purposes and the deepest considerations. Let us determine that the impetus that shall be given to homœopathy, in our own land and in the world, by these hours of consultation, shall be only surpassed by the rushing waters of yonder falling flood. Again I congratulate you upon this auspicious morning. For you who have visited these scenes before, I can bespeak a higher pleasure than you have ever experienced, because, I think, at each succeeding visit,

there arises in the mind a more perfect appreciation of its wonderful sublimity and beauty. No finite mind can at first take in the infinity that shrouds these scenes.

And to you who listen for the first time to the never-ceasing thunders of Niagara, and attempt to span its mighty wonders in a day, let me assure you, that though you may be disappointed at first with its breakers and its flood, it is only because the rushing, whirling waters, the deep, dark channel, the magnificent descents, and the tumult of the scene, perplex, embarrass and confound you. And as the hours and days shall pass, and you look and look again upon the trembling flood, the shimmering spray, the spanning and brilliant bow, and emerald caldron as it boils and ceases not, you too will be lost in wonder and admiration, as you join the throng that in this mighty flood see the glory and the strength of the Infinite.

Some of you have come from the whirl and turmoil of city life, where ever-changing professional and civil pursuits daily introduce you to new and varied scenes of interest and excitement. Others have come from the quiet inland city or town, where little change ever greets them. Others come from hamlet and rural scenes, where there is nought but the humdrum of every-day work. And yet I trust you all come richly laden with professional experience, and all aglow with zeal for the work, and will all alike lay your offerings on the altar of medical experience.

I congratulate you all and bid you thrice welcome; welcome to this place of rest away from work and care. For a little while no noonday call or midnight bell shall disturb your quiet hours. Welcome to this place where mind shall measure mind, and each shall strive to sow some seed in his brother's garden, which shall in future be to him a help and source of lasting good. Pain, sorrow, disease and death have been the arch enemies of the race, ever since the glittering sword of justice was suspended across the gate of the garden of Paradise and the order went forth to man that in the sweat of his face he should eat bread, and to the woman that in sorrow she should bring forth her young. And he who has stood forth among his kind as the champion to combat and peradventure conquer this great and

dreaded enemy, has ever merited and received the homage and worship of his fellow-men. From the time when the simple shepherd on the slopes of the far-off oriental hills bound up his bleeding foot with bruised herbs, and knew no other remedy, to this day of grace, there has been one continued line of medical exponents. Some made their cures with the plant that grew by the wayside; others by strange incantations and witchery; and again, others with the hidden metals of the earth, or the pregnant waters of the bubbling spring. Each in their turn, with arguments to them incontrovertible, have declared theirs the regular and only safe and effectual mode of cure. Some flashed their lurid light across the medical horizon, dazzling all beholders, and yet were quickly burnt out and gone; others with a steadier flame shone on for a longer time, and only disappeared amid the brightness of some other rising light. And all along the pathway of medical history lie the shattered beacons that in their day burnt so brightly as to dazzle, decoy, and sometimes even destroy. But the grand old names of medical history stand out upon its pages in bold relief. Hippocrates, Plato, Aristotle, Galen, Harvey, Jenner, Hahnemann, and a host of others, make up a roll of as brilliant names as ever illumined the pages of any science. And a long array of names of scarcely lesser note may be added, to swell the lists of the great ones of the science and the art of healing.

And yet in this age of ours, this nineteenth century, there has been a still greater development of the arts and sciences;—a utilizing, so to speak, of all the knowledge of the past; making this the golden century of the world. The mind of man has made wonderful strides towards the Infinite. He bids the sunlight to stand still, and it paints pictures on the wall. The lightning writes messages of peace and war, and at man's touch the words go trembling round the world. He chains a burning coal and a drop of water to his chariot wheels, and they drag him thundering across the continent. The whirling storm that gathers its bitter blasts far off among the bleak and ice-bound rocks of the great Northwest, at man's behest sends a message of his approach to the tossing shores of the shivering Atlantic. He measures new planets and marks their way in the

heavens; he stitches the islands and continents together with his electric threads, and bids all nature, and she comes crouching at his feet.

The arts and sciences have reached a higher plane of perfection than ever before in any age of the world; and yet, when I write these lines, and think that time must elapse before they are read, I fear they may be tame and insipid, so rapid are the developments of the age, and so wonderful the pictures they unfold. He must be a progressive student indeed, who would keep pace with the onward march.

In all the centuries there have arisen men of genius and renown, whose discoveries or developments of some grand truths have aroused the controversy and the criticism of their compeers; and while some of these have stood the test of trial, others have failed and have been forgotten. On every page of medical history, since the time when the father of the race stood by, to pity and relieve, when the first human birth was wrought out in agony and suffering, till this day of grace, there has been written some new thought, some new idea, some grand discovery for the amelioration of the woes and ills of man. Some have proved to be beacon lights of the grandest brilliancy; pole stars to steer towards which has ever been safe and beneficent. Others have been like the will-o'-the-wisp, leading those who have followed them to disaster.

In the early part of the present century it was thought by some that the science of medicine had gained its acme, and that in all the annals of art there was nothing so perfect as medical practice. Her exponents puffed themselves out with pride, arrogance and self-esteem. The medical man was the first in importance and influence among men honored and sought after. His word was law from which no one dared to appeal. From his judgment none ever thought to depart, and he ruled a submissive and truculent race, whose fears made them obedient, even unto death. The lance, the leech, the cup, the plaster, and the nauseous drug, were submitted to without comment or question. But all along the track of these men of science, there were new-made graves, covering new-made mistakes and blunders. There has, however, ever been a race of true men on the

earth, who would not bend the knee to Baal; who could not receive or believe any truth without investigation. By them and through them *we* stand to-day amid grander developments in the science and art of medicine than the world has ever before known. The study of anatomy with the aid of the microscope has made the composition of our frames, even to the minutest molecule, as familiar to us as are the bones of the pelvis. Every throb of the heart is pictured among the tissues, as the blood trembles from point to point in its liquid flow, even to the remotest fibres. Chemistry has grown to be familiar in all its branches, even to the school-boy. Surgery does its work without blood or pain; the poor diseased and suffering patient sleeps with all his imperfections, and awakes remodelled.

Thus we might go on with every branch collateral to the medical art, and above them all write "*progressive.*" But in the practice of medicine, *per se*, there have been greater strides towards perfection than in any kindred branch during all the past. Even among those who are the slowest to learn, those who follow on in the old Hippocratic rut, never daring to turn aside, even among those there is a great change. The lance, the leech, the blister, have almost been discarded, and the heroic dose is only made the venture of a forlorn hope. But the grandest discovery of the century was made by Hahnemann, when, for the first time in all the ages, he proclaimed a perfect law of cure.

I need not lead you back to his researches, conclusions and struggles. I need not recount the ignominy and scorn that met him at every turn and step; for which of his disciples who hears me to-day has not drank of the same bitter cup? But I will turn your attention towards what he and his doctrines have achieved. That banner on which he emblazoned his creed and teachings, has at length been unfurled to the breeze in every corner of the globe, from the frozen north to the frozen south, and from the "centre all round to the sea." Millions of men and women bless and extol the memory of our great leader, as the greatest benefactor of his kind; and if the progress of homœopathy during the next fifty years achieves what its advancement during the last half a century seems to warrant, there

will be needed another world to convert. Unlike all other new doctrines, the system of homœopathy has ever found its converts among the rich, the noble, the wise, the learned and thinking classes of society, and that against the strongest storm of prejudice, bigotry and intolerance that the world has ever developed. Its enemies have ignored every kindly and charitable instinct, every genial and fraternal feeling, and sometimes every sentiment of manliness and decency; and even during the past year they have committed wrongs against reason, truth, and science, which would bring a blush of shame to the face of any one but a bigot; and while many of the exponents of homœopathy have written their names high on the roll of honor, either by their skill, patience, or erudition, their enemies have covered theirs with disgrace.

There has never been a year since the first promulgation of homœopathy in Germany that it has not retained its footing. And over the continent of Europe, where the strictest enactments of civil law hedge round the medical institutions to prevent heresies and new ideas being advanced without the sanction of those who claim to know all that should be known, even there the homœopathic students graduate year by year, boldly asserting their adherence to the new faith, and their followers are numbered by the thousand.

In response to our call and greeting, they send back such cheering words as these: In Germany we are three hundred strong, and the march is onward. France hears the cry and claims three hundred and twenty as her quota of homœopathic physicians; with dispensaries, hospitals, and pharmacies. Six dispensaries in Paris alone, dispensed during the last year fifty thousand prescriptions to the poor. Austria has three hundred homœopathic practitioners; Belgium has fifty, and Italy two hundred more. Spain claims two hundred as her number of those who dare to act for progress and truth. Denmark, Norway, Russia, Holland, Weimar, Portugal, Sweden, Turkey, and Switzerland, have together three hundred more; and from Asia, Africa, and the Islands of the sea, there comes the encouraging response, that the numbers even there are increasing steadily. From England, Wales, Scotland and Ireland, there comes the cheering

word, that with three hundred doctors, men of the highest stamp, the demand is still for more. In the response to the inquiry as to the position, progress and future of Homœopathy in Great Britain, the editor of the *Homœopathic World*, in April echoed the inquiry to his subscribers, and in return received numerous communications. From an article prepared by the editor, based on these communications, the following extracts will be of interest to you all:

"In our last issue we put the question,—Homœopathy, is it advancing or retrograding? and requested our readers to furnish us with trustworthy data concerning their own immediate neighborhoods, which might form the basis of some returns which we propose to make in reply to a communication from the president-elect of the '*American Institute of Homœopathy.*'

"I. *Increased popularity.* A professional correspondent, who has been many years in practice, and whose communications often enrich our pages, writes as follows:

"'There is good reason to believe that the people generally in this country, whether rich or poor, have become convinced, that our rule of cure is a most valuable one; and there is, probably, not a village in the country, wherein the people are utterly unacquainted with our medical system. Meanwhile, that homœopathic practice is steadily gaining ground in the hearts of the people, and in the inner consciences of physicians and surgeons in general, there can be no doubt whatever.'

"Another, from a totally different part of the country, says:

"'You inquire whether Homœopathy has retrograded in these parts? What a question! When I first introduced the practice into this my native county a quarter of a century ago, I found several families here and there, who were already firm believers in Homœopathy; but now families may be counted by the score.'

"'A great proof of the advance of Homœopathy is its adoption in the agricultural districts, farmers using it for their stock as well as their families. A few years ago, where the giving of a few drops of a homœopathic remedy would have been laughed to scorn, now you will find some half-a-dozen or more of the remedies carefully put away for use in emergency; the results are, as you may well imagine, perfectly satisfactory. The disease

that enables us to get the best footing is *milk fever*. Here the ordinary farrier or veterinary is powerless, and is perfectly amazed on calling after the animal has received homœopathic treatment, to find it recovering. And there is no doubt of the result of the treatment if you can attend the animal in time. The remedies work like a charm. Another decade is sure to find Homœopathy in a *far* higher position than at present. Already I think there are but few stables in the country where you would not find *Arnica* or *Calendula*, or both, used as externals, and the use of internal homœopathic remedies will soon follow.'

"This statement is true of other agricultural districts also.

"II. *Increased number of Hospitals, Homes, Dispensaries, etc., and of Patients attending them.* The erection and opening of such institutions as these shows the higher estimate that is formed of our system by those who have the means of providing for the relief of their poorer neighbors; and attendance at them shows how greatly the provision is valued by those who need the relief. The London Homœopathic Hospital was founded in October, 1849; during the year 1872, there were 7454 patients; from its opening to the 31st December, 1872, there were 104,086. There are hospitals at Bath, Birmingham, Doncaster, and Manchester; there is a convalescent home at Hastings, and a children's sanatorium at Southport. There are forty public dispensaries and seventy-nine private dispensaries, scattered all over the land. Many of them are under the most distinguished patronage, managed by careful committees, and superintended by the highest professional skill.

"In Liverpool, for the last fourteen years, the mayor of the year has almost without exception presided at the annual meeting of the Homœopathic Dispensary. At the meeting in January last, it was stated in the report that—

"'The number of new patients treated since the opening of these institutions has been 192,270. During the past year the total number of applicants, including visits at the two dispensaries, has been 52,022; the number of new cases 16,903; the number visited at their own homes 1552; and the number of visits paid 5812.'

"III. *Extension among Physicians and Surgeons.* That ordi-

nary people are convinced of the truth of our principle, and the beneficence of our practice by the cures they witness, cannot be questioned. The same 'logic of facts,' doubtless, goes far towards the conviction of many medical men that there is 'something in the system,' although they are not prepared to avow that conviction. It shows itself, however, in various ways: Homœopathy is spoken of with less contempt, and its adherents are not treated as such 'ignorant simpletons' as they used to be.

"'To state the case briefly as regards this town and neighborhood, the Allopathy of twenty years ago has died and left no successor; and although I am the only ostensible representative of Homœopathy, yet the practice of younger men in the ranks of the general body is rapidly assimilating to Homœopathy in some of its main features. For myself, both professionally and socially, I occupy a place in the foremost rank of local practitioners.'

"Another correspondent says:

"'For the last six years I have encountered no bitter ridicule or opposition such as I used to meet with from my Æsculapian brethren. The chemists, who at first arose against me with extraordinary pocket violence, are now completely mollified.'

"A correspondent in another Northern city states:

"'Only to-day, I heard of two of the most distinguished physicians in our city, who were almost persuaded to come over to us, and their secession may, I am informed, take place any day.'

"This is always the course that secession takes; for as our Birmingham correspondent asks, 'Does any one know a homœopathic surgeon, or physician, who has become an allopath?' The testimony to the increased number of such seceders,—for, be it ever borne in mind that they have received full training, have passed their examinations, and have won their honors, in the allopathic medical schools,—the testimony is furnished by several of our correspondents:

"'With regard to homœopathic progress, I should think the homœopathic chemists could unfold a tale; medicines are everywhere sold.'

"'In Ross and Hereford the chemists now exhibit handsome cases of homœopathic globules, pilules, and tinctures, for which there is a considerable and increasing demand.'

"Why, the same might be said of every important town in the kingdom. Before us is a list of more than 200 recognized agents for the sale of our medicines; how many sell them who have not been appointed 'agents' it is impossible to tell; and we offer no conjecture, as we are solicitous to record only ascertained facts. But this we know, that not many years ago it was not a pleasant thing to go from one chemist's shop to another to get a bottle of pilules, for you had to walk far and encounter smiles or scowls; whereas now there are not many chemists who cannot serve you.

"V. *Increased Numbers and Sale of Publications.*—Respecting this we quote from the Homœopathic Directory for 1874:

"'In nothing, however, is our real progress more apparent than in our literature. During no similar period (one year) in the history of homœopathy do we remember to have seen our various periodicals filled with so much sterling and valuable matter; matter, in many cases containing the results of years of patient study or of a ripened practical experience.'

"In view of the facts we have now strung together we think that, through the great kindness of our correspondents, we have been able to answer the inquiry,—'Homœopathy, is it advancing or retrograding?' and we think we shall be able to make a satisfactory report to our American friends."

In the new world the increase has been a marvel even to its warmest friends and supporters. From the bleak and rocky hills of the far off eastern settlements of Nova Scotia to the plains of Mexico; from the swamps of Florida to Alaska's ice-bound shores; and from the varied and beautiful border of the broad Atlantic to the peaceful and vernal shores of the placid Pacific, in every State and nearly every county, it has obtained a standing and is gaining strength. So that from the little State of Rhode Island with its forty-eight physicians, to the great State of New York with its eight hundred, and Pennsylvania with its six hundred and fifty, Massachusetts with its four hundred, Illinois with four hundred, Michigan with four hundred, New Jersey with one hundred and fifty, and every other State in proportion, making in all some five thousand—these

numbers being augmented year by year—a good showing is given of the progress of the system in this country.

The newspaper press of the country is nearly unanimously on the side of homœopathy; and their condemnation, in strong utterance, is to be heard all over the land, whenever occasion is offered by some overt act of bigotry on the part of the old school.

The people are demanding a place for homœopathy in the public institutions and hospitals of the land. Delegations led by distinguished men visit the councils and boards of health, and ask for a place in the medical institutions under their control, asking it as a right rather than as a favor; and I opine that the time is not far in the distance when all barriers will be broken down which now keep homœopaths, as medical men, out of public charitable institutions, and they will be admitted to places of trust and professional responsibility equally with physicians of the allopathic school. In fact, we may claim that this time has already been entered upon; the entering wedge has already been placed in the gap. New Jersey, by her legislature, says to the freeholders of Hudson County, in that State, one of your board of health and vital statistics "shall be chosen from the new school of medicine commonly called Homœopathy." Well done New Jersey! In this act of thine thou hast made one stride past all other States. Thou hast outstripped them all in the race towards freedom, liberality and honor, and henceforth thy name shall stand first on the roll, as the friend of the right and the enemy of bigotry, prejudice and oppression.

There was a time in the past that our students must needs attend allopathic colleges in order to gain a complete and perfect course of medical education; but that time has gone by, and there is not a city of any pretensions that cannot boast of a good homœopathic college, or of great expectations of soon having one. And now the student can complete his course without travelling far away from his home. Chicago, St. Louis, Cincinnati, Cleveland, Philadelphia and New York, offer inducements that ought to be sufficient to satisfy the most fastidious. And in Boston, during the past year, they have shown us how a medical college can spring, at a single bound, into the arena, fully equipped and

ready for the race, with a splendid corps of professors, and a class of students equalling that of many other colleges of mature age.

And while we look with pride to our medical colleges, and greet with pleasure the hundreds of thoroughly taught and trained students that they graduate year by year and send forth into the great field of workers, we also look with admiration upon the developments of and emanations from the press. Our periodicals and serials are full and rich with medical experience and research. Of books, during the past year, we have works on surgery, diseases of women and children, ophthalmic surgery, post-mortem examinations, domestic practice, and many others. And in addition to these there are, in embryo, as it were, several magnificent works on Materia Medica.

In fact, in every branch of medical science we have our own skilled writers, and of them and their works we may well feel proud.

We are gathered here to-day to celebrate our thirty-first anniversary, and it is befitting that we turn our attention for a little to the progress we have made during that time.

In June, 1844, a little band of disciples of Hahnemann gathered in an upper room in the city of New York, to take into consideration the feasibility of forming a national medical society. They were men of ability, determination, and zeal; men who had thrown their all into the balance of truth and for the advancement of science. They were men who bore about with them the reproach and shame that all those must bear who dare to turn aside from the old and beaten track into new ways in medical matters. To be a homœopath in those days was regarded as a disgrace.

After considerable deliberation, Dr. Constantine Hering, of Philadelphia, was elected President, and Dr. John F. Gray, of New York, General Secretary, and the name of the American Institute of Homœopathy was adopted, and this association was successfully ushered into existence.

In laying the foundation of this Institute, principles at once liberal, broad, and comprehensive were the chief elements of its composition. Its founders knew how bitter it was to be despised because they dared to think and act for themselves; but they

went forward with the great law of cure as their guiding-star, and with a strong determination to prove all things and hold fast to the good. And the men who had the courage and will, amid such influences and opposition, to successfully inaugurate an institution which has stood so firmly for over thirty years, and which has demanded and received the admiration, esteem, and support of the entire homœopathic profession, these men, I say, should have their names written in immortal letters on the history whose first page they wrote. Therefore I recommend that the names of the *Founders* be placed upon a single page of the *Transactions*, and there retained from year to year; the fall of each venerable head being indicated, until the last shall be gathered home to rest; and that then, and thereafter, as long as this Institute exists, *that* page shall stand alone, bordered with a wreath of *immortelles*, as an humble tribute to their memory and a mark of our veneration, esteem, and endless gratitude.

For thirty-one years some of these *fathers* have given us their counsel and advice. Many of them have died at their posts. Some yet remain, and I look upon them to-day with love and veneration, and pray God that he in his mercy will spare them yet many years.

From the day when that little company, in prayer and in faith, set up this Institute in the cause of science, truth, and humanity, to this day, there has been a steady onward march towards success and final triumph. There have been thousands of names upon its roll; and, at this present session, more than one thousand names appear upon its list of members. The atmosphere of public opinion, amid which we gather to-day, is as clear as the noonday sun, as compared with the mists and fogs of prejudice that overshadowed them at the first.

The American Institute of Homœopathy has reached a time in its history when each page it writes must go forth to the world either for the good or ill of homœopathy. It must scatter broadcast o'er the earth its ideas and principles, to be appreciated and honored. The thirty-one years of its history just closed are years of unexampled prosperity and harmony. Scarce a ripple has ever disturbed the waters across which it has sailed, and it stands to-day more than a thousand strong. Each year has

added greatly to its strength in mental, moral, and scientific attainments. This goodly heritage, which our fathers have left us, let us cherish with reverence and regard. Let us see to it that no petty strife breaks the long and blessed peace. Let us give to all the rights we ourselves would gain. In all doubtful questions let us be kind, patient, and enduring, ever believing that the great unraveller, time, will make all things plain. We have espoused a great and mighty truth,—a principle and law in medicine which must effect a revolution in the medical world. Through the years of infancy, of obloquy, derision and scorn, toil, anxiety and care, we have struggled towards the light. Intelligence, reason, patience and religion, have been our watchwords. Friends, advocates, patrons and adherents, have gathered in millions around the standard we bear, and shout it on to victory. Remember, no empire, no kingdom, no sect, ere fell so soon as those which fell by intestinal strife. Let us see to it, then, that we are not our own worst enemy. Let us remember that while we are not all made to look alike and act alike and see alike, in natural things, yet we are all men with the same functions, governed and swayed by different impulses and feelings. Let us be charitable in all things, and pray for wisdom and patience to help us to the pure light of truth; but let us remember that our strength and success as an association lie not alone in numbers, but in being right and true, in harmony, discipline, and organization.

The wise general who would succeed in battle gathers company to column, column to regiment, regiment to corps, corps to battalion, battalion to brigade, brigade to the grand combination of armies that reach from plain to plain and from mountain to mountain, and whose thundering tread shakes the earth, and whose columns in even and steady evolutions sweep across the trembling plain, and with discipline and in order bear down all opposition. So it should be with this Institute. In every State, and in every county of every State,—yea, in every village and town where there are but three good and true homœopathists, there should be an organized force, which should be a part of a thoroughly disciplined army of workers and fighters for truth and right. This can be brought about if there is a

determination to do it. And then, when a great wrong is to be righted, with what immense power could such an army, by concerted movement, advance upon the enemy's works and bear down all opposition and redress all wrongs.

This Institute should have one or two good live members in every nation on the globe where homœopathy has a footing, thereby sending its influence, encouragement and assistance round the world. As there is a power of wonderful import even in the name of our American ensign, wherever the morning breeze has unfolded its stripes or rippled among its stars, so, in the medical world, wherever the name of the American Institute of Homœopathy is heard, it should demand respect, homage, confidence and esteem, and this shall be if you will it.

Finally, my brethren, let me entreat you to so quit yourselves this session as to add one more page to this Institute's honorable history; yet a page so replete with wisdom and experience as to surpass all others. Remember, that out from the ages there is looking down upon us many a martyr for the truth; many a one who trod the road o'er thorns and briers; many a one who clambered up the steep towards the light and truth which you enjoy, amid darkness and gloom; some who saw the light just as it was emerging from the glimmering east; some who watched it as steadily and surely it arose toward the zenith. These, all these, I say, are looking down upon us, who, on this day of grace, are baptized in the full glory and noonday of homœopathic success.

In addition, the President made the following recommendations:

Recommendations by the President.

I. I recommend that the names of the constituent members of the Institute be printed annually in the *Transactions*, after the manner referred to in the President's Address.

II. I recommend that a certain number of *honorary* and *corresponding* members be elected annually, to be chosen from the homœopathic practitioners of foreign nations, until every nation is thus represented in the Institute. And further that such

members be requested to furnish annual statements concerning the condition of homœopathy in their respective countries.

III. I recommend that the Bureau of Materia Medica, Pharmacy, and Provings be divided, so as to give a wider range to these important branches.

IV. I recommend that all members of the Institute travelling abroad be constituted from year to year the *Committee on Foreign Correspondence;* and that the names of all such members making a report at any annual meeting, be published as said committee in the *Transactions.*

V. I recommend the forming of a Bureau of Microscopy, to consist of at least five members.

VI. I recommend the appointment of a Botanical Committee for this session, whose duty it shall be to present to the Institute each day two or three specimens of medicinal plants which they may secure in their excursions.

VII. I recommend that the *Committee on Legislation* be instructed to prepare a bill or act to present to Congress, authorizing or instructing the Signal Service Corps to report the effects of atmospheric changes upon disease in different portions of the country.

DR. P. P. WELLS, of Brooklyn, N. Y.: Before we pass to other business, I should like to correct an error in the President's Address. The first President of the Institute was not Dr. Flagg, of Boston, as stated in the Address, but Dr. Constantine Hering, of Philadelphia. An imperfect command of the English language which Dr. Hering was conscious of, and his innate modesty, led him to decline when nominated; but the members of the Institute insisted upon his being the first President, because it was his due, and he was elected. Dr. Flagg sat beside Dr. Hering as an assistant, but Dr. Hering was nevertheless the first President of the Institute.

DR. F. R. MCMANUS, of Baltimore, Md., corroborated the statement of Dr. Wells.

THE PRESIDENT: I was informed that Dr. Flagg was the first President. The error shall be corrected.

N. R. MORSE, M.D., Salem, Mass.: I move that the thanks of the Institute be extended to the President for his very able, in-

structive, and eloquent address, and that a committee of five be appointed to take into consideration the suggestions of the President, and report thereon during the session.

The motion was put by the General Secretary and unanimously agreed to.

S. R. BECKWITH, M.D., of Cincinnati, moved, as an amendment to the order of business, that where two or more bureaus are appointed to report during a session, the time shall be divided equally between them.

Agreed to.

THE PRESIDENT announced the following appointments:

COMMITTEE ON CREDENTIALS.

N. R. MORSE, M.D., Salem, Mass.
R. B. RUSH, M.D., Salem, Ohio.
T. L. BROWN, M.D., Binghamton, N. Y.

AUDITING COMMITTEE.

E. DARWIN JONES, M.D., Albany, N. Y.
GEORGE A. HALL, M.D., Chicago, Ill.
HENRY E. STONE, M.D., Fairhaven, Conn.

THE PRESIDENT likewise appointed George W. Swazey, M.D., of Springfield, Mass., Cornelius Ormes, M.D., of Jamestown, N. Y., and George H. Wilson, M.D., of West Meriden, Conn., members of the Board of Censors, to complete the Board.

The Necrologist, Henry D. Paine, M.D., of New York, being absent, it was moved and carried that his report be received at a later period of the session.

A. E. SMALL, M.D., of Chicago, moved to amend the standing resolution relating to the limit of time allotted to speakers, extending the time to ten minutes for each speaker, which was agreed to.

S. LILIENTHAL, M.D., of New York: I move that the various bureaus, after they have exhausted their allotted time before the Institute, shall have the privilege of holding sectional meetings for the reading and discussion of their papers and the transaction of their business; and that the proceedings of these sectional

meetings shall be a part of, and shall be incorporated with, the Transactions of the Institute.

Agreed to.

BUREAU OF ANATOMY, PHYSIOLOGY, AND HYGIENE.

J. D. BUCK, M.D., of Cincinnati, Chairman of the Bureau of Anatomy, Physiology, and Hygiene, then presented the report and papers of the bureau. The papers were as follows:

Observations on the Lymphatics; by A. R. THOMAS, M.D., of Philadelphia, Pa. (Section VII, Art. XXI.)

The Functions of the Lymphatic Glands; by F. F. DE DERKEY, M.D., of Mobile, Ala. (Section VII, Art. XXII.)

Diseases of the Lymphatic Glands and Vessels and their Relations to Other Diseases; by WILLIAM VON GOTTSCHALK, M.D., of Providence, R. I. (Section VII, Art. XXIII.)

The Functions and Disorders of the Lymphatics; by J. D. BUCK, M.D., of Cincinnati, Ohio. (Section VII, Art. XXIV.)

A Synopsis of the paper by Dr. A. R. Thomas was read, and the paper was accepted and referred to the Committee of Publication.

The remaining papers of the bureau were read by their respective authors, accepted, and referred to the Committee of Publication.

The report of the bureau was then discussed (Section VII, APPENDIX), after which the bureau was declared to be closed, on motion of A. E. Small, M.D., of Chicago.

THE PRESIDENT then announced that the bureau would be constituted as follows for the ensuing year:

Bureau of Anatomy, Physiology, and Hygiene for 1875.

WILLIAM VON GOTTSCHALK, M.D., *Chairman*,	Providence, R. I.
J. D. BUCK, M.D.,	Cincinnati.
A. R. THOMAS, M.D.,	Philadelphia.
A. R. WRIGHT, M.D.,	Buffalo, N. Y.
THOMAS SHEARER, M.D.,	Baltimore.
F. F. DE DERKEY, M.D.,	Mobile, Ala.
T. Y. KINNE, M.D.,	Paterson, N. J.
H. B. VAN NORMAN, M.D.,	Cleveland, Ohio.

THE PRESIDENT then announced that the next business in order would be the presentation of the report and papers of the

BUREAU OF MATERIA MEDICA, PHARMACY, AND PROVINGS.

Dr. J. P. Dake, of Nashville, Tenn., in the absence of the Chairman of the Bureau, opened the business of the Bureau by reading a paper prepared by himself, entitled "*A Vindication of the Bureau of Materia Medica*," etc., which paper was received and referred to the Committee of Publication. (Section II, Art. XLV.)

A paper presented through Dr. H. H. Baxter, of Cleveland, Ohio, entitled "*Verifications of Lilium tigrinum*," was then read, accepted, and referred to the Committee of Publication.

DR. J. P. DAKE then read his paper, entitled "*A College of Drug Provers for the Cultivation of Materia Medica.*" This paper was, on motion, accepted and referred to the Committee of Publication. (Section II, Art. XLVI.)

The reading of Dr. Dake's paper was followed by a prolonged discussion (Section II, APPENDIX) at the close of which a motion was made to postpone the further consideration of the business of the bureau until the evening session, which was agreed to.

REPORT OF THE TREASURER.

E. M. KELLOGG, M.D., of New York, *Treasurer*, then submitted his annual report, which was referred to the Auditing Committee. (Section I, Art. XXXIII.)

REPORT OF THE COMMITTEE OF PUBLICATION.

R. J. MCCLATCHEY, M.D., *General Secretary*, presented the following report in behalf of the Committee of Publication:

The Committee of Publication respectfully report that they have fulfilled the duties of their appointment in the preparation and publication of a volume of 763 pages, containing the transactions of the Institute at its last Annual Session, held in Cleveland, copies of which have been distributed to members entitled to receive them, to journals, public libraries, and foreign homœopathic medical associations.

The committee beg leave to call the attention of the Institute to the fact that certain papers read at the last session, accepted thereat, and referred to

the committee, copies of which were retained by the writers, were published elsewhere than in the volume of *Transactions* of the Institute. And the committee would urge upon the Institute the propriety of taking such measures looking to the protection of papers of the Association as shall prevent a recurrence of the abovementioned act.

Respectfully submitted on behalf of the Committee of Publication.

ROBERT J. MCCLATCHEY,
General Secretary.

The report was, on motion, accepted.

DR. F. R. MCMANUS, of Baltimore, Md., chairman of the Board of Censors, then made a partial report from the Board, presenting the names of a number of applicants for membership. He stated that the Board recommended these applicants for membership after as thorough an investigation of their claims as was possible for the Board to make.

On motion of DR. I. T. TALBOT, the application of Dr. M. T. Utley, of Montreal, Dominion of Canada, was referred back to the Board of Censors, for further consideration by the Board.

The remaining applicants were then admitted to membership by a unanimous vote.

THE PRESIDENT announced the following committee of five, to consider and report on the suggestions contained in the President's Address: J. P. DAKE, M.D., Nashville, Tenn.; N. R. MORSE, M.D., Salem, Mass.; A. E. SMALL, M.D., Chicago; GEORGE A. HALL, M.D., Chicago; JOHN R. READING, M.D., Philadelphia.

The Institute then adjourned, to meet at eight o'clock in the evening.

EVENING SESSION.

The Institute was called to order at eight o'clock by the President.

THE SECRETARY read a partial report from the committee appointed to consider and report on the recommendations of the President. The committee reported that they would recommend that a Botanical Committee for the session be appointed, to consist of three members.

The report was accepted and the recommendation adopted.

BUREAU OF MATERIA MEDICA, PHARMACY, AND PROVINGS.

(Continued.)

THE PRESIDENT: The business of the Bureau of Materia Medica will now be resumed.

The chairman of the bureau, Dr. T. F. Allen, is now present, and will complete the report.

TIMOTHY F. ALLEN, M.D., of New York: Before proceeding with the business of this bureau, I feel it to be my duty to apologize for my absence this morning, which, I assure you, was unavoidable. I have a number of interesting and valuable papers belonging to the bureau, in addition to those read this morning. The full report of the bureau exhibits the following list of papers:

Vindication of the Bureau of Materia Medica; by J. P. DAKE, M.D., of Nashville, Tenn. (Section II, Art. XLV.)

A College of Drug Provers for the Cultivation of Materia Medica; by J. P. DAKE, M.D., of Nashville, Tenn. (Section II, Art. XLVI.)

On the Significance of Primary and Secondary Symptoms; by E. M. HALE, M.D., of Chicago. (Section II, Art. XLVII.)

Provings of Physostigma venenosum (Calabar Bean); presented by T. F. ALLEN, M.D., of New York. (Section II, Art. XLVIII.)

Provings of Hamamelis Virginica; by WALLACE MCGEORGE, M.D., of Woodbury, N. J. (Section II, Art. XLIX.)

Provings of Tanacetum vulgare; by ALFRED K. HILLS, M.D., of New York.

Fragmentary Proving of Lactic Acid; by ALFRED K. HILLS, M.D., of New York.

Verification of Lilium tigrinum; presented by H. H. BAXTER, M.D., of Cleveland, O.

Provings of the "Aztec Flower" (a Mexican gentian); by EMMA SCOTT, M.D., of New York.

Provings of the "Fresh Egg-shell with the Membrane on;" by CAROLINE B. WINSLOW, M.D., of Washington, D. C.

Single Provings not to be Published.

DR. ALLEN, after making some explanatory remarks as to the nature of the papers not read, moved that they be accepted and referred to the Committee of Publication. The motion was seconded.

T. P. WILSON, M.D., of Cincinnati, moved to amend, excepting the papers in which provings were presented by a single prover; and that these be referred back to the Bureau of Materia Medica, to be retained by them until a sufficient number of provings have been made to warrant the bureau in collating and presenting them to the Institute for publication.

DR. T. F. ALLEN accepted the amendment, and the motion as amended was unanimously agreed to. (Section II, APPENDIX.)

DR. J. P. DAKE then resumed the discussion of the subject of re-proving the Materia Medica. (Section II, APPENDIX.)

DR. T. F. ALLEN, at the close of Dr. Dake's remarks, moved that the bureau be declared closed.

Agreed to.

THE PRESIDENT then announced that the bureau would be constituted as follows, for the ensuing year:

Bureau of Materia Medica, Pharmacy, and Provings for 1875.

CARROLL DUNHAM, M.D., *Chairman*,	Irvington-on-Hudson, N. Y.
CONRAD WESSELHŒFT, M.D., .	Boston.
TIMOTHY F. ALLEN, M.D., . .	New York.
E. M. HALE, M.D., . . .	Chicago.
WILLIAM E. PAYNE, M.D., . .	Bath, Me.
WALLACE MCGEORGE, M.D., . .	Woodbury, N. J.
JABEZ P. DAKE, M.D., . . .	Nashville, Tenn.
J. HEBER SMITH, M.D., . . .	Melrose, Mass.
H. H. BAXTER, M.D., . . .	Cleveland, O.

THE PRESIDENT: The next business in order will be the presentation of the report and papers of the

BUREAU OF CLINICAL MEDICINE.

L. E. OBER, M.D., of La Crosse, Wis., chairman of the bureau, stated that Meningitis Cerebro-spinalis had been selected

by the bureau as the subject for a report, and that while every effort has been made to secure a full series of papers on that subject, he had, he regretted to say, but four papers in his possession bearing on it; and, moreover, as he had received them only since coming to the meeting, he had been prevented making a résumé of the papers or supplying any deficiencies. He had been desirous of having the papers in his possession by the 1st of March, for these purposes; but members had not kept their promises with him. He then announced the following papers:

Diagnosis, Pathology, and Prognosis of Meningitis Cerebro-spinalis; by WM. H. WATSON, M.D., of Utica, N. Y. (Section III, Art. LII.)

Report of Cases of Meningitis Cerebro-spinalis; by GEORGE A. HALL, M.D., of Chicago. (Section III, Art. LIII.)

The Effects of Meningitis Cerebro-spinalis upon the Heart; by BUSHROD W. JAMES, A.M., M.D., of Philadelphia. (Section III, Art. LIV.)

History of Meningitis Cerebro-spinalis; by MICHAEL FRIESE, M.D., of Harrisburg, Pa.

A Case of "Spontaneous Hydrophobia;" by O. P. BAER, M.D., of Richmond, Ind. (Section III, Art. LV.)

Œnothera biennis, a new remedy for the Eruptive Fevers; by T. RIKER NUTE, M.D., of Chicago.

On Reporting Clinical Cases; by L. E. OBER, M.D., of La Crosse, Wis. (Section III, Art. LI.)

Lunar Influence; by WILLIAM EGGERT, M.D., Indianapolis, Ind.

Hausmann on the Causes and Conditions of Disease; by F. F. DE DERKEY, M.D., of Mobile, Ala.

DR. B. W. JAMES then read Dr. W. H. Watson's paper on the *Diagnosis, Pathology, and Prognosis of Meningitis Cerebro-spinalis.*

DR. GEORGE A. HALL read his paper entitled, *Report of Cases of Meningitis Cerebro-spinalis.*

DR. B. W. JAMES read a synopsis of his paper on *The Effects of Meningitis Cerebro-spinalis upon the Heart.*

DR. L. E. OBER read his paper on *Reporting Clinical Cases.*

DR. WILLIAM EGGERT then read his paper entitled *Lunar Influence.*

The remaining papers of the bureau were read by title, accepted, and referred to the Committee of Publication.

The papers read were then discussed at considerable length, (Section III, APPENDIX), and subsequently referred to the Committee of Publication.

DR. E. M. KELLOGG, of New York, asked for and obtained unanimous permission to offer as part of the report of the Bureau of Clinical Medicine, and to have printed in the Transactions, a paper on Statistics which he had prepared, and which had been published in pamphlet form. (Section III, Art. LVI.)

On motion, the bureau was then declared closed.

THE PRESIDENT announced that the bureau for the ensuing year would be constituted as follows:

Bureau of Clinical Medicine for 1875.

H. NOAH MARTIN, M.D., *Chairman*,	Philadelphia.
S. LILIENTHAL, M.D.,	New York.
L. E. OBER, M.D.,	La Crosse, Wis.
W. H. HOLCOMBE, M.D.,	New Orleans, La.
E. C. BECKWITH, M.D.,	Columbus, O.
W. H. WATSON, M.D.,	Utica, N. Y.
WILLIAM EGGERT, M.D.,	Indianapolis, Ind.
J. F. COOPER, M.D.,	Alleghany, Pa.
JONATHAN PETTET, M.D,	Cleveland, O.

THE PRESIDENT: You will remember that you voted to have a Botanical Committee, to report at each morning session. I appoint therefore the following

BOTANICAL COMMITTEE.

DR. T. F. ALLEN, New York.
DR. WILLIAM VON GOTTSCHALK, Providence, R. I.
DR. HENRY DETWILER, Easton, Pa.

I would suggest to this committee that they make their reports from day to day immediately upon the opening of the morning session.

The Institute then adjourned, to meet on Wednesday morning at 9 o'clock.

SECOND DAY.

MORNING SESSION.

The Institute was called to order at 9 o'clock by the President.

The Botanical Committee, consisting of Drs. T. F. Allen, Henry Detwiler, and William von Gottschalk, made their first report, presenting and describing a number of the common medicinal plants found in the vicinity of the Falls. Among these were the Plantago major, Taraxacum, Arctium lappa, Rhus radicans, Verbascum thapsus, Hyoscyamus niger, Cynoglossum officinale, Rumex crispus, Abies Canadensis, Thuya occidentalis, Podophyllum peltatum, Arum triphyllum, and Sambucus.

THE SECRETARY presented a communication from Adam Miller, M.D., of Denver, Colorado, a former member of the Institute, calling the attention of the Institute to an announcement in a Denver newspaper, to the effect that an extensive hospital was about to be erected at Colorado Springs for the treatment of affections of the respiratory organs, said institution to be conducted under the auspices of the American Institute of Homœopathy, and stating further, that Martin Mayer Marix, M.D., a member of the Institute, had in charge this undertaking. The Secretary stated that the Institute had taken no action whatever looking to the establishment of a hospital in Colorado, and it might be proper and prudent for the Institute to repudiate all connection with the scheme referred to.

A. E. SMALL, M.D., of Chicago: Mr. President, I may mention that I have received a letter from an estimable gentleman of Denver, calling my attention to the same matter. My correspondent spoke of it as an adroit measure to promote a speculation. I think the Institute should take action in the matter.

On motion of Dr. F. F. de Derkey, the General Secretary was directed to write to Dr. Marix, and admonish him against allowing the name of the Institute to be made use of in such manner as represented.

COMMITTEE ON CLIMATOLOGY.

A. R. WRIGHT, M.D., of Buffalo, N. Y., in the absence of

Dr. M. MAYER MARIX, Chairman of the Committee, then presented the report and papers of the Committee on Climatology. These papers were as follows:

Climatology of Colorado, with special reference to Diseases of the Respiratory Organs; by M. MAYER MARIX, M.D., of Denver, Col. (Section XIII, Art. I.)

Report on the Climate of California and its Sanitary Conditions, with Meteorological Observations; by FREDERICK HILLER, M.D., of San Francisco, Cal. (Section XIII, Art. II.)

A Report on Climatology; by A. R. WRIGHT, M.D., Buffalo, N. Y. (Section XIII, Art. III.)

DR. WRIGHT read his paper entitled *A Report on Climatology*, which was accepted and referred to the Committee of Publication.

The remaining papers were read by title, accepted, and referred to the Committee of Publication.

On motion, the business of the committee was declared to be closed.

THE PRESIDENT then announced that the following physicians would constitute the

Bureau of General Sanitary Science and Climatology for 1875.

BUSHROD W. JAMES, M.D., *Chairman*,	Philadelphia.
A. R. WRIGHT, M.D.,	Buffalo, N. Y.
THOMAS NICHOL, M.D.,	Montreal, Canada.
LUCIUS D. MORSE, M.D.,	Memphis, Tenn.
WILLIAM H. LEONARD, M.D.,	Minneapolis, Minn.
D. H. BECKWITH, M.D.,	Cleveland, O.
F. H. ORME, M.D.,	Atlanta, Ga.
T. W. DONOVAN, M.D.,	New York.

J. P. DAKE, M.D., offered the following resolution, which was unanimously adopted:

Resolved, That the Bureau of Climatology of the American Institute of Homœopathy be and they are hereby instructed to secure reports from the chief points of observation of the Signal Service of the United States Army, establishing the prevalence of various diseases at these points from time to time.

BUREAU OF OBSTETRICS.

R. LUDLAM, M.D., of Chicago, in the temporary absence of

the chairman of the bureau, presented one of the papers of the bureau, which was read and briefly discussed.

O. B. GAUSE, M.D., of Philadelphia, then read his paper entitled *The Treatment of Puerperal Fever*, which was likewise discussed.

J. C. SANDERS, M.D., of Cleveland, O., chairman of the bureau, then announced that the bureau had selected Puerperal Fever as a subject to be presented and discussed at this meeting, and that the following papers were in possession of the bureau:

Clinical History of Puerperal Fever; by J. F. COOPER, M.D., of Alleghany, Pa. (Section IV, Art. XLI.)

Etiology and Infectiousness of Puerperal Fever; by MARY J. SAFFORD BLAKE, M.D., of Boston, Mass. (Section IV, Art. XLII.)

The Differential Diagnosis and Prognosis of Puerperal Fever; by R. LUDLAM, M.D., of Chicago, Ill. (Section IV, Art. XLIII.)

Regimenal Management of Puerperal Fever; by J. C. SANDERS, M.D., Cleveland, O. (Section IV, Art. XLIV.)

The Treatment of Puerperal Fever; by O. B. GAUSE, M.D., of Philadelphia. (Section IV, Art. XLV.)

These papers were read, accepted, and referred to the Committee of Publication.

The subject was then discussed at considerable length (Section IV, APPENDIX), whereupon the bureau was declared closed, with the understanding that it should hold a sectional session, the proceedings of which should be incorporated with the published proceedings of the Institute. (Section IV, APPENDIX.)

THE PRESIDENT then announced that the following physicians would constitute the Bureau of Obstetrics for the ensuing year:

Bureau of Obstetrics for 1875.

J. H. WOODBURY, M.D., *Chairman*,	Boston.
O. B. GAUSE, M.D.,	Philadelphia.
J. T. ALLEY, M.D.,	St. Paul, Minn.
S. P. BURDICK, M D.,	New York.
MERCY B. JACKSON, M D.,	Boston.
J. C. SANDERS, M.D.,	Cleveland, O.

S. LILIENTHAL, M.D., of New York, then presented the report and papers of the

BUREAU OF GYNÆCOLOGY.

These papers were as follows:

Post-partum Uterine Hemorrhage; by MICHAEL FRIESE, M.D., of Harrisburg, Pa. (Section XI, Art. I.)

Uterine Hemorrhage; by CORNELIUS ORMES, M.D., of Jamestown, N. Y. (Section XI, Art. II.)

Hemorrhage after Labor; by WILLIAM H. HUNT, M.D., of Covington, Ky. (Section XI, Art. III.)

The Homœopathic Treatment of Uterine Hemorrhage; by MERCY B. JACKSON, M.D., of Boston, Mass. (Section XI, Art. IV.)

The Sequelæ of Post-partum Hemorrhage; by S. LILIENTHAL, M.D., of New York.

Menorrhagia and its Treatment; by E. G. COOK, M.D., of Buffalo, N. Y. (Section XI, Art. V.)

The Treatment of Menorrhagia; by C. B. WINSLOW, M.D., of Washington, D. C.

A Case of Menorrhagia; by L. A. REN DELL, M.D., of New York.

Vaginal Hernia: Operation for Radical Cure; by WILLIS DANFORTH, M.D., of Chicago, Ill. (Section XI, Art. VI.)

DR. S. R. BECKWITH read the paper by Dr. W. H. Hunt, entitled *Hemorrhage after Labor.*

DR. LILIENTHAL read the paper by Dr. E. G. Cook, on *Menorrhagia and its Treatment.*

MERCY B. JACKSON, M.D., of Boston, Mass., read her paper entitled *The Homœopathic Treatment of Uterine Hemorrhage.*

JULIA A. DUNNING, M.D., of Corry, Pa., stated a case of uterine hemorrhage of a very grave character, which occurred in her practice, and which was promptly suppressed by a vaginal injection of hot water.

CORNELIUS ORMES, M.D., of Jamestown, N. Y., read his paper on *Uterine Hemorrhage.*

The remaining papers of the bureau were read by title, and referred to the Committee of Publication.

The papers read were then discussed at considerable length (Section XI, APPENDIX), after which these papers were accepted and appropriately referred.

On motion, the bureau was then declared closed.

THE PRESIDENT announced that the Bureau of Gynæcology for the ensuing year would be constituted as follows:

Bureau of Gynæcology for 1875.

S. R. BECKWITH, M.D., *Chairman*,	Cincinnati, O.
J. C. BURGHER, M.D.,	Pittsburg, Pa.
ISAAC W. SAWIN, M.D.,	Providence, R. I.
WILLIAM H. HUNT, M.D.,	Covington, Ky.
R. LUDLAM, M.D.,	Chicago, Ill.
S. S. LUNGREN, M.D.,	Toledo, O.
W. A. EDMUNDS, M.D.,	Memphis, Tenn.
H. F. HUNT, M.D.,	Camden, N. J.
CORNELIUS ORMES, M.D.,	Jamestown, N. Y.

The *Auditing Committee* presented their report, stating that they had examined the accounts and vouchers of the Treasurer, and had found them correct.

On motion, the report was accepted, and the committee discharged.

On motion, the Treasurer's report was adopted.

T. P. WILSON, M.D., of Cincinnati, O.: Mr. President, I now give notice, that at the proper time I shall make a motion to advance the annual dues to ten dollars.

On motion, the Institute then adjourned, to meet at eight o'clock in the evening.

EVENING SESSION.

The Institute was called to order at eight o'clock by the President.

THE PRESIDENT: The first business in order for the evening's session is the presentation of the report and papers of the

BUREAU OF PÆDOLOGY.

N. R. MORSE, M.D., Salem, Mass.: Mr. President, in the

absence of Dr. T. C. Duncan, the chairman of the bureau, I have been selected to present the report and papers. I would announce that the bureau selected Cholera Infantum as a subject for presentation; and it gives me pleasure to announce that we have several essays on that subject. The bureau likewise presents a paper on another subject. The papers are as follows:

Nature and Etiology of Cholera Infantum; by T. C. DUNCAN, M.D., of Chicago, Ill. (Section XII, Art. I.)

The Pathology of Cholera Infantum; by NATHAN R. MORSE, M.D., of Salem, Mass. (Section XII, Art. II.)

Hygienic Management and Diet in Cholera Infantum; by EMMA SCOTT, M.D., of New York.

Therapeutics of Cholera Infantum; by HENRY NOAH MARTIN, M.D., of Philadelphia. (Section XII, Art. III.)

Suggestions respecting the Influence of Functional Activity of the Reproductive System in Lactation and the Nutrition of Infants; by G. H. WILSON, M.D., West Meriden, Conn. (Section XII, Art. IV.)

DR. N. R. MORSE read the paper of Dr. T. C. Duncan, on the *Nature and Etiology of Cholera Infantum.*

DR. MORSE also read his own paper entitled *The Pathology of Cholera Infantum.*

HENRY NOAH MARTIN, M.D., of Philadelphia, then read his paper on the *Therapeutics of Cholera Infantum.*

F. R. MCMANUS, M.D., of Baltimore, Md., made a statement involving his experience with Cholera Infantum. (Section XII, APPENDIX.)

G. H. WILSON, M.D., of West Meriden, Conn., made a brief statement of the views maintained in his paper.

The papers of the bureau were then discussed at length. (Section XII, APPENDIX.)

It was moved and carried that the papers of the bureau be accepted and referred to the Committee of Publication.

On motion, the bureau was then declared closed.

THE PRESIDENT announced that the following physicians would constitute the

Bureau of Pœdology for 1875.

D. S. SMITH, M.D., *Chairman*,	Chicago, Ill.
F. R. MCMANUS, M.D.,	Baltimore, Md.
EMMA SCOTT, M.D.,	New York.
T. C. DUNCAN, M.D.,	Chicago, Ill.
F. B. MANDEVILLE, M.D.,	Newark, N. J.
N. R. MORSE, M.D.,	Salem, Mass.
J. H. PULTE, M.D.,	Cincinnati, O.
C. W. SONNENSCHMIDT, M.D.,	Washington, D. C.
L. M. KENYON, M.D.,	Buffalo, N. Y.

THE PRESIDENT: The next business in order will be the report of the

COMMITTEE ON FOREIGN CORRESPONDENCE.

As there are no members of that committee present, I call upon Dr. Carroll Dunham to make a statement to the Institute. I understand that he has an interesting and valuable report to make concerning the condition of Homœopathy in Italy, and one or more letters from Dr. Tommaso Cigliano, of Naples.

CARROLL DUNHAM, M.D., of Irvington-on-Hudson, New York, then made a very interesting statement regarding the rise and progress of Homœopathy in Naples, and read translations of letters he had received from Dr. Cigliano.

On motion, the report and letters were accepted and referred. (Section I, Art. XXXIX.)

THE PRESIDENT announced that the Committee on Foreign Correspondence for the ensuing year would be constituted as follows:

Committee on Foreign Correspondence for 1875.

CONRAD WESSELHŒFT, M.D., *Chairman*,	Boston, Mass.
CARROLL DUNHAM, M.D.,	Irvington-on-Hudson, N.Y.
CHARLES A. BACON, M.D.,	New York.
T. S. VERDI, M.D.,	Washington, D. C.
E. B. DE GERSDORFF, M.D.,	Boston, Mass.

THE PRESIDENT: The next business in order will be the presentation of the report of the *Committee on Homœopathic Colleges.*

DAVID THAYER, M.D., of Boston, Mass., chairman of the committee, presented the report. Objection being made that the report was not sufficiently full or exact in some respects, Dr. Thayer explained that the committee had made strenuous efforts to secure full and exact reports from all the colleges, but had failed to do so. He was willing to make any alterations or corrections in the report that might be desired.

J. P. DAKE, M.D., a member of the committee, moved that the report be referred back to the committee for amendment, to be again presented at one o'clock on the following day.

Agreed to.

THE PRESIDENT: The next business in order will be the presentation of the report of the

COMMITTEE ON A HOMŒOPATHIC DISPENSATORY.

CARROLL DUNHAM, M.D., presented the report of the committee, which was, on motion, accepted, and referred to the Committee of Publication. (Section I, Art. XXXIV.)

J. T. ALLEY, M.D., of St. Paul, Minn.: I move, Mr. President, that the subject of selecting a place of meeting for the Institute next year, be the order of business for to-morrow morning, prior to the opening of the Bureau of Surgery.

A MEMBER: I second Dr. Alley's motion.

DR. I. T. TALBOT: I move, as a substitute for Dr. Alley's motion, that a committee of three be appointed to receive invitations and suggestions for the meeting in 1875, and report them to the Institute to-morrow morning, before the Bureau of Surgery makes its report.

The question being taken on Dr. Talbot's substitute, it was agreed to.

THE PRESIDENT: I appoint Drs. I. T. Talbot, J. T. Alley, and W. A. Edmunds, of Memphis, said committee.

THE PRESIDENT: The Institute will now take action on the

NEW CONSTITUTION AND BY-LAWS,

Prepared by a committee appointed for the purpose, presented at the last session of the Institute, laid over until the present session, and ordered to be printed. The General Secretary has

had the report of the committee printed as directed, and copies have been distributed amongst the members.

DR. J. P. DAKE: I move, Mr. President, that the General Secretary read the proposed new Constitution, article by article, and that we take action on each article as read.

Agreed to.

THE GENERAL SECRETARY then read the articles of the proposed Constitution *seriatim;* at the same time reading the corresponding article of the Constitution as it then existed. In this manner the Institute passed upon every article of the Constitution, adopting each of the sections as presented by the committee, excepting the first section, which was amended, after a prolonged discussion. The Constitution was then adopted as a whole. (Section I, Art. XL.)

The By-Laws presented by the committee were then taken up, amended, and disposed of in a similar manner. (Section I, Art. XL.)

DR. S. R. BECKWITH moved that the former Constitution and By-Laws, and the Standing Resolutions of the Institute, in so far as their provisions have been incorporated with the Constitution and By-laws now adopted, and in so far as they are in conflict with the provisions of said Constitution and By-laws, be and they are hereby repealed.

Agreed to.

The *Order of Business*, presented by the committee, was then adopted. (Section I, Art. XL.)

The Institute then adjourned, at two o'clock A.M., to meet in the morning at nine o'clock.

THIRD DAY.

The Institute was called to order at nine o'clock by the President.

T. F. ALLEN, M.D., presented the morning report of the Botanical Committee, with specimens of medicinal plants. Among the plants presented were Euphorbia, Juniperus communis, Uva Ursi, Asclepias Syriaca or cornuti, Apocynum perfoliatum, Polygala Senega, Zizia aurea.

NECROLOGICAL REPORT.

HENRY D. PAINE, M.D., of New York, *Necrologist*, then presented the Necrological Report, which was, on motion, accepted and referred to the Committee of Publication. (Section I, Art. XXV.)

F. R. MCMANUS, M.D., Chairman of the Board of Censors, made a supplementary report from the Board, presenting the names of a number of applicants for membership who had been found qualified.

The physicians recommended were then elected to membership. (See *Complete Report of the Board of Censors.*)

Time and Place of Next Meeting.

THE PRESIDENT: The next business in order will be the selection of the place of meeting for 1875. The committee appointed last evening to receive invitations and report to the Institute, will now render their report.

I. T. TALBOT, M.D.: Mr. President, your committee have had placed in their hands written invitations from the State Society of New Jersey, inviting the Institute to meet next year at Long Branch, N. J.; from the State Society of Minnesota, inviting the Institute to meet at St. Paul, Minn.; Drs. Eggert and Hunt, of Indianapolis, invite the Institute to meet in their city; Drs. Lungren, of Toledo, and Buck, of Cincinnati, propose Put-in Bay as the most suitable and desirable place; Dr. Currier, of Vermont, invites the Institute to meet at Burlington, in that State; and suggestions have been made that the meeting be held at Lake George and at Saratoga.

On motion, the report of the committee was accepted, and the committee discharged.

After considerable discussion, the Institute voted to hold its next meeting at Put-in Bay, Lake Erie, commencing on the second Tuesday in June (8th), 1875.*

* The Executive Committee, under authority granted them by the Institute, and for good and sufficient reasons, have decided that the meeting shall be held on the *third* Tuesday in June (15th), 1875.

THE PRESIDENT: The next business in order will be the presentation of the report and papers of the

BUREAU OF SURGERY.

L. H. WILLARD, M.D., of Alleghany, Pa.: Mr. President, I have received a letter from Dr. E. C. Franklin, of St. Louis, Chairman of the Bureau of Surgery, in which he states that greatly to his regret he finds himself unable to attend the meeting of the Institute, and requesting me to take charge of the papers, and make the report of the bureau. The bureau, however, has had a meeting, and we unanimously agreed that Dr. S. R. Beckwith should act as chairman of the bureau.

S. R. BECKWITH, M.D., of Cincinnati: Mr. President, as my friend, Dr. Willard, has just told you, I have had the honor conferred upon me of presenting the report and papers of the Bureau of Surgery, in the absence of its distinguished chairman, Dr. E. C. Franklin. At the last session of the Institute, the bureau of surgery determined to prepare a full and complete report on dislocations and fractures. Assignments of subjects were made to the various members of the bureau, those regarded as the most important being assigned to the surgeons of the largest experience. In addition to this, the bureau agreed to solicit contributions from surgeons not members of the bureau. We hoped and expected to present such a mass of valuable material as would make a handsome volume of from two to three hundred pages, the text to be illustrated by appropriate cuts. The expense to be incurred in publishing this report, over and above such an amount as would pay for the publication of an ordinary report from the bureau, was to be borne by the members of the bureau. We proposed to thus issue a supplementary volume to the Transactions, and such a one as would be a monument to the ability and industry of the surgeons of the homœopathic school of medicine. But, sir, for various reasons, our intent has not been carried out to the full. Some members have failed to render reports on the subjects assigned them, some because of absence and because of sickness. Yet, sir, it gives me pleasure to state that the papers in possession of

this bureau are both numerous and valuable—many of them very valuable. They are as follows:

Fractures of the Cranium; by E. C. FRANKLIN, M.D., of St. Louis, Mo. (Section V, Art. I.)

Dislocations and Fractures of the Pelvis; by WM. TOD HELMUTH, M.D., of New York. (Section V, Art. II.)

Dislocations of the Shoulder, Elbow, Wrist, and Phalanges; by LEWIS H. WILLARD, M.D., of Alleghany, Pa. (Section V, Art. VII.)

Fractures of the Leg; by J. H. MCCLELLAND, M.D., of Pittsburg, Pa. (Section V, Art. III.)

Fractures of the Bones of the Face; by J. G. GILCHRIST, M.D., of Tidioute, Pa. (Section V, Art. IV.)

Fractures and Dislocations of the Ankle; by S. R. BECKWITH, M.D., of Cincinnati, O. (Section V, Art. VIII.)

Ununited Fractures and Delayed Union; by HAMILTON F. BIGGAR, M.D., of Cleveland, O. (Section V, Art. V.)

Seventy-four Cases of Fracture; by MALCOLM MACFARLAN, M.D., of Philadelphia. (Section V, Art. VI.)

Hydrarthrosis of the Knee-joint; by R. E. CARUTHERS, M.D., of Alleghany, Pa. (Section V, Art. IX.)

L. H. WILLARD, M.D., of Alleghany, Pa., read a synopsis of his paper on *Dislocations of the Shoulder, Elbow, Wrist, and Phalanges.*

J. H. MCCLELLAND, M.D., of Pittsburg, Pa., read his paper on *Fractures of the Leg.*

S. R. BECKWITH, M.D., read a synopsis of Dr. E. C. Franklin's paper on *Fractures of the Cranium.*

DR. WILLARD read the paper by Dr. J. G. Gilchrist, on *Fractures of the Bones of the Face.*

The remaining papers of the bureau were read by title, received, and referred to the Committee of Publication.

The subjects presented were then briefly discussed. (Section V, APPENDIX.)

E. D. BURR, M.D., of Lansing, Mich., by permission of the Institute, made a brief statement, illustrating the efficacy of

homœopathic medicines as adjunctive treatment in cases of fracture.

The papers read were then, on motion, accepted, and referred to the Committee of Publication, and the bureau was declared closed.

THE PRESIDENT: I will announce that the following gentlemen will constitute the

Bureau of Surgery for 1875.

L. H. WILLARD, M.D., *Chairman*,	Alleghany, Pa.
WILLAM TOD HELMUTH, M.D.,	New York.
MALCOLM MACFARLAN, M.D.,	Philadelphia.
E. C. FRANKLIN, M.D.,	St. Louis, Mo.
H. M. JERNEGAN, M.D.,	Boston, Mass.
H. F. BIGGAR, M.D.,	Cleveland, O.
J. H. MCCLELLAND, M.D.,	Pittsburg, Pa.
GEORGE A. HALL, M.D.,	Chicago.
J. R. FLOWERS, M.D.,	Columbus, O.

THE PRESIDENT: The committee appointed to take into consideration the recommendations of the President, are now prepared to report.

J. P. DAKE, M.D., then presented the following

REPORT OF THE SPECIAL COMMITTEE ON THE RECOMMENDATIONS OF THE PRESIDENT.

Your Committee on the recommendations of the President, in his very able address, beg leave to report, that they find therein measures of importance, some of which have already been incorporated in the By-laws adopted since the delivery of the address, and some of which they now submit for adoption, in the form of amendments to the By-laws.

1. That the names of the *Senior Members* of the Institute be placed by themselves at the head of the list of names annually published in the volume of Transactions, and be printed in capital letters; those deceased to be properly designated.

2. That all members of the Institute travelling abroad be considered members of the Committee on Foreign Correspondence; and that the names of all such as may furnish communications to the Institute at an annual meeting, shall appear on such committee in the published proceedings of this body.

3. That there shall be a *Bureau of Microscopy*, consisting of five members,

who shall institute examinations, and report annually all discoveries and improvements in that department of science.

J. P. DAKE,
CARROLL DUNHAM,
N. R. MORSE,
A. E. SMALL,
J. R. READING,
Committee.

On motion of Dr. J. C. Sanders, the report was accepted, and the committee discharged.

On motion, the recommendations of the committee were adopted, and the General Secretary was directed to incorporate these amendments with the By-laws.

J. P. DAKE, M.D., moved that Section II, Article V, of the By-laws, be so amended as to include asylums for the insane.

Agreed to.

S. R. BECKWITH, M.D., of Cincinnati, then presented the following, being a report of an institution for the treatment of mental and nervous diseases:

MR. PRESIDENT, Ladies and Gentlemen, there has long been felt by the members of your profession, a want of an institution in the West where those afflicted with mental and nervous diseases could find a quiet retreat, possessing the comforts of a home, safe to themselves or to others, and where they could receive the advantages to be derived from homœopathic medication.

To accomplish this object, two of your number, Drs. W. H. Hunt and S. R. Beckwith, recently brought to our notice an opportunity to purchase large and commodious buildings, having all the conveniences and modern appliances required in such an institution, being located on the highest, and among the most beautiful of the suburbs of Cincinnati, and surrounded with extensive grounds, undulating by nature, and improved to a high perfection of beauty by art.

No sooner had we become acquainted with this attractive spot, and the worthy object proposed for its future use, than we became its owner, and added everything within our power that could promote the comfort and cure of those who were to occupy its rooms.

We recognized the justice of the principle so long held by yourselves, viz., "that all institutions and asylums of the country should allow patients or their friends the choice of the medical treatment they desired." In establishing our asylum for the insane, we determined to be governed by the same justice, and to permit every patient to have the same kind of medical treatment in the institution they received before losing their reason. To obtain a physician of experience, and to carry out the plan proposed, we were successful in procuring the services of Dr. William L. Peck as resident

physician; a gentleman who had gained an enviable reputation during his long connection with the Central Ohio Lunatic Asylum, he being physician in chief, and is well known among his profession as professor of psychology in the Sterling Medical College of Columbus, Ohio; also, to procure equally valuable medical services for those desiring homœopathic treament, we engaged Drs. W. H. Hunt and S. R. Beckwith, of our city, too well known to yourselves to require any comment from us.

We desire to be recognized and to be known as an institution founded upon the liberal basis mentioned. We have appointed Dr. S. R. Beckwith as our delegate to your honorable body, instructing him to respectfully ask recognition by yourselves of our institution under the name of the *Cincinnati Sanitarium* for the treatment of mental and nervous diseases; also, that you may receive our future reports in the same manner as you do those of other institutions. Respectfully submitted,

H. PRENTISS, Secretary. JOHN L. WHETSTONE, President.

On motion, the above communication was accepted, and Dr. S. R. Beckwith was recognized as a delegate from the institution named.

THE PRESIDENT: The next business in order will be the presentation of the report and papers of the

BUREAU OF OPHTHALMOLOGY AND OTOLOGY.

HENRY C. HOUGHTON, M.D., of New York: I have the honor, Mr. President, to present the papers of this bureau. The subjects selected for special report were Cataract and Catarrhal Inflammation of the Middle Ear. The following are the papers of this bureau:

Hard Cataract; by MALCOLM MACFARLAN, M.D., of Philadelphia. (Section IX, Art. VIII.)

Traumatic Cataract; by C. H. VON TAGEN, M.D., of Cleveland, O. (Section IX, Art. IX.)

Congenital Cataract; by T. P. WILSON, M.D., of Cincinnati, O. (Section IX, Art. X.)

Catarrhal Inflammation of the Middle Ear; by HENRY C. HOUGHTON, M.D., of New York. (Section IX, Art. XI.)

The Abuses of Politzer's Method in the Treatment of Catarrhal Inflammation of the Middle Ear; by WILLIAM N. GUERNSEY, M.D., of New York. (Section IX, Art. XII.)

Retinitis from Bright's Disease; by T. P. WILSON, M.D., of Cincinnati. (Section IX, Art. XIII.)

Secondary Glaucoma from Riband-shaped Opacities of the Cornea; by GEORGE S. NORTON, M.D., of New York. (Section IX, Art. XIV.)

The Physiological Action of Iridectomy in Glaucoma; by S. J. BUMSTEAD, M.D. (Section IX, Art. XV.)

Aqua chlorinii and Baryta jodata in Ophthalmic Practice; by C. T. LIEBOLD, M.D., of New York. (Section IX, Art. XVI.)

Engorged Papilla and its Significance; by W. H. WOODYATT, M.D., of Chicago, Ill. (Section IX, Art. XVII.)

T. P. WILSON, M.D., of Cincinnati, O., read his paper on *Congenital Cataract.*

HENRY C. HOUGHTON, M.D., of New York, read his paper on *Catarrhal Inflammation of the Middle Ear.*

DR. HOUGHTON read Dr. W. N. Guernsey's paper on *The Abuse of Politzer's Method.*

W. H. WOODYATT, M.D., of Chicago, read his paper on *Engorged Papilla and its Significance.*

C. T. LIEBOLD, M.D., read his paper on *Aqua chlorinii and Baryta jodata in Ophthalmic Practice.*

DR T. P. WILSON read his paper on *Retinitis from Bright's Disease.*

The remaining papers of the bureau were read by title, accepted, and referred to the Committee of Publication.

The papers read were briefly discussed (Section IX, APPENDIX), whereupon it was moved and carried that the bureau hold a sectional meeting, at the call of its chairman. (Section IX, APPENDIX.)

The papers read were then accepted and referred to the Committee of Publication, and the bureau was declared closed.

THE PRESIDENT then announced that the following gentlemen would constitute the

Bureau of Ophthalmology, Otology, and Laryngology for 1875.

HENRY C. HOUGHTON, M.D., *Chairman*,	New York.
T. P. WILSON, M.D,	Cincinnati.
C. T. LIEBOLD, M.D.,	New York.
W. H. WOODYATT, M.D.,	Chicago.
HENRY C. ANGELL, M.D.,	Boston.
W. L. BREYFOGLE, M.D.,	Louisville, Ky.
GEORGE S. NORTON, M.D.,	New York.

THE PRESIDENT: You will remember that you voted to organize a Bureau of Microscopy. I therefore announce that the following physicians will constitute the

Bureau of Microscopy for 1875.

O. P. BAER, M D, *Chairman*,	Richmond, Ind.
T. F. ALLEN, M D.,	New York.
BUSHROD W. JAMES, M.D.,	Philadelphia.
J. D. BUCK, M.D.,	Cincinnati, O.
D. G. WOODVINE, M.D.,	Boston.

THE PRESIDENT: The hour has arrived for the

REPORT OF THE COMMITTEE ON HOMŒOPATHIC COLLEGES.

DAVID THAYER, M.D., of Boston, Mass.: Mr. President, I deem it my duty to acknowledge that, in the report submitted yesterday, there were omissions which I greatly regret, although they were purely accidental, and, I may say, under the circumstances, unavoidable. The committee has endeavored to render a full measure of justice to every homœopathic college in the United States.

DR. THAYER then read the report of the committee, which was accepted, and referred to the Committee of Publication. (Section I, Art. XXXVII.)

Accompanying the report was the following resolution, providing for the organization of

AN INTERCOLLEGIATE COMMITTEE.

Resolved, That the American Institute of Homœopathy cordially and earnestly recommends all homœopathic colleges in this country to adopt a uniform system of education and requirement; and to this end would further recommend to each homœopathic college to appoint one or more members of its faculty to constitute an intercollegiate committee, whose duty it shall be to recommend and adopt such rules of comity and other measures as will further the above object.

On motion, the resolution was unanimously adopted.

THE PRESIDENT: The next business in order will be the report of the

BUREAU OF PSYCHOLOGICAL MEDICINE.

GEORGE W. SWAZEY, M.D., of Springfield, Mass., chairman of the bureau, announced that the papers of the bureau were as follows:

Mental Diseases, in relation to Homœopathy; by J. H. P. FROST, M.D., of Danville, Pa. (Section VIII, Art. V.)

Psychical Nosology; by GEORGE F. FOOTE, M.D., of Stamford, Conn. (Section VIII, Art. VI.)

The Retentive Power of the Sensorial Faculties; by C. G. RAUE, M.D., of Philadelphia. (Section VIII, Art. VII.)

Mind Influence in the Cure of Disease; by T. L. BROWN, M.D., Binghamton, N. Y. (Section VIII, Art. VIII.)

Popular Psychology; by GEORGE W. SWAZEY, M.D., of Springfield, Mass. (Section VIII, Art. IX.)

These papers were read, and the subjects presented by them were briefly discussed (Section VIII, APPENDIX), after which they were accepted and referred to the Committee of Publication.

The bureau was then, on motion, declared closed.

THE PRESIDENT then announced that the bureau for the ensuing year would be constituted as follows:

Bureau of Psychological Medicine for 1875.

HENRY R. STILES, M.D., *Chairman*,	Middletown, N. Y.
GEORGE W. SWAZEY, M.D.,	Springfield, Mass.
GEORGE F. FOOTE, M.D.,	Stamford, Conn.
T. L. BROWN, M.D.,	Binghamton, N. Y.
SAMUEL WORCESTER, M.D.,	Burlington, Vt.
J. H. P. FROST, M.D.,	Danville, Pa.
T. DWIGHT STOW, M.D.,	Fall River, Mass.
J. B. HUNT, M.D.,	Indianapolis, Ind.

The Institute then adjourned, to meet on Friday morning at nine o'clock.

FOURTH DAY.

The Institute was called to order at nine o'clock by the President.

J. P. DAKE, M.D.: I understand, Mr. President, that there is but one hotel at Put-in-Bay, the place selected for our next meeting; and if that be the case, it is possible that the Executive Committee may find some difficulty in making the proper arrangements. I therefore offer the following resolution:

Resolved, That in case satisfactory arrangements cannot be made at Put-in-Bay for the next meeting of the Institute, the Executive Committee shall have power to select and make arrangements for holding the meeting at some other place in the West.

The resolution was adopted.

J. B. WOOD, M.D., West Chester, Pa.: Mr. President, I have a preamble and resolution to offer to the Institute, and I wish to make some remarks upon it afterwards. It has reference to the

USE OF TOBACCO.

WHEREAS, The American Institute of Homœopathy was founded for the mutual benefit of its members in respect to the science of that school of medicine, and likewise in regard to the proper physical, mental, and moral condition of all who may associate themselves with it in membership, and by its emphatic condemnation, in every stage of its progress, of alcoholic stimulants as a beverage, and likewise by their almost total banishment from the room of the sick, deserves the thanks of every friend of humanity, and should incite to further effort; therefore,

Resolved, That we, as an association, believing as we do in the physical, mental, and moral wellbeing, not only of our members, but of the community at large, do hereby condemn in unmeasured terms the use of tobacco in all its forms, except as a medicine in accordance with the homœopathic law of cure, believing it to be a fruitful cause of many diseases which afflict the human family, and that we will in all suitable ways discountenance its use.

DR. MCMANUS seconded the resolution.

DR. WOOD then spoke at considerable length in favor of the adoption of the preamble and resolution; whereupon it was moved and carried that they be laid on the table.

DR. MCMANUS then submitted the

FINAL REPORT OF THE BOARD OF CENSORS.

Objection was made to the admission of Dr. E. D. Burr, of Lansing, Michigan. The application of Dr. Burr was then referred back to the censors.

It was moved and carried, that the applicants recommended by the board, excepting Dr. Burr, be declared members of the Institute.

F. R. McMANUS, M.D., Baltimore, Md.: Mr. President and fellow-members, I crave your indulgence while I say a few words. After my departure from the meeting at Cleveland last year, my friend, Dr. Lilienthal, paid me the high compliment to move a vote of thanks to me for the manner in which I had discharged the duties of a member and chairman of the Board of Censors for a number of years; and I have been told that the motion was unanimously adopted by a standing vote of the Institute. Since then, I have had the honor to receive, at the hands of my friend, our able Secretary, the vote of thanks you so heartily gave me, handsomely engrossed and framed. I consider myself as highly honored by the action of the Institute, and I wish here and now publicly to return my thanks and acknowledgments to you all, including the General Secretary for the graceful manner in which he carried out the wishes of the Institute.

Dr. R. LUDLAM offered the following resolution:

Resolved, That the records of all the discussions of the several bureaus be printed each in its proper department in the volumes of *Transactions*.

The resolution was adopted.

BUREAU OF MEDICAL LITERATURE.

S. LILIENTHAL, M.D., of New York, presented the report of the Bureau of Medical Literature, which was read, accepted, and referred to the Committee of Publication. (Section X, Art. III.)

THE PRESIDENT: I appoint the following as constituting the

Committee on Medical Literature for 1875.

I. T. TALBOT, M.D., *Chairman*,	Boston, Mass.
S. A. JONES, M.D.,	New York.
R. LUDLAM, M.D.,	Chicago.
S. LILIENTHAL, M.D.,	New York.
W. H. HOLCOMBE, M.D.,	Cincinnati, O.

BUREAU OF ORGANIZATION, REGISTRATION, AND STATISTICS.

THE SECRETARY presented the report of the bureau, which was accepted and referred to the Committee of Publication. (Section VI, Art. XVI.)

THE PRESIDENT announced that the following members would constitute the

Bureau of Organization, Registration, and Statistics for 1875.

E. U. JONES, M.D., *Chairman*,	Taunton, Mass.
H. M. SMITH, M.D.,	New York.
T. S. HOYNE, M.D.,	Chicago.
M. F. PAGE, M.D.,	Appleton, Wis.
PEMBERTON DUDLEY, M.D.,	Philadelphia.
JONATHAN PETTET, M.D.,	Cleveland, O.

THE SECRETARY: I have had placed in my hands by members several resolutions, which they desire to have offered. They will probably be acted upon without debate. I will read them *seriatim:*

Resolved, That hereafter any member of the Institute, who shall publish or cause to be published any report or paper read before the Institute, accepted and referred to the Committee of Publication, elsewhere than in the regular volume of *Transactions*, shall be deemed guilty of an offence which shall subject the member offending to the censure of the Institute.

The resolution was adopted.

Resolved, That the Institute instructs the Committee on Legislation to consider and report what action may be required in the several *States* to establish hospitals for the insane, to be under homœopathic control, upon the same basis as the allopathic State asylums.

This resolution, which was offered by Dr. George W. Swazey, was adopted.

Resolved, That the bureaus of the Institute which pertain to practical medicine and surgery, be hereafter arranged in rotation, so that each one may come first in its turn in successive years.

This resolution, which was likewise offered by Dr. George W. Swazey, was adopted.

COMMITTEE OF ARRANGEMENTS.

Resolved, That the Executive Committee are hereby appointed the Com-

mittee of Arrangements for the next meeting, with full power to act, and with power to add to their number.

This resolution, which was offered by Dr. Talbot, was adopted.

THE PRESIDENT: The next business in order will be the report of the

COMMITTEE ON LEGISLATION.

I. T. TALBOT, M.D., of Boston, made a verbal report, for the committee. He said that several matters had been referred to the committee, which they had thought best not to take action on without obtaining further advice from the Institute. He would instance particularly the matter of obtaining a charter or act of incorporation for the Institute. It had been found that it would be a very difficult task, wellnigh impossible, to obtain such an act from the United States government. The questions then came before the committee, whether it would be desirable to have a charter from a State; and if so, to what State should application be made. There seemed to be a peculiar fitness in applying to New York, if a State were to be applied to at all, inasmuch as the Institute was organized in that State, and its history is intimately connected with it. This whole question, however, your committee preferred to refer to the Institute.

Your committee was likewise desirous of having prepared a full account of all legislation in the different States favorable and unfavorable to homœopathy. In many States, as you all know, there has been considerable legislation favorable to homœopathy, such as the granting of charters to colleges, hospitals, etc., and grants of money to these and other similar charitable institutions. In one State, New York, the government has been very liberal in its enactments in the matter of an asylum for the treatment of the insane; and we are told that, in another State, Pennsylvania, there is a very strong probability that similar action will be taken by the Legislature. But there are other States where no legislative action has been taken which in any way touches the interests of homœopathy. And there has been some legislation in some of the States inimical, or calculated to be so, to homœopathy, and some that was simply offensive. As an instance of the latter, I would refer to a measure intro-

duced into the Massachusetts Legislature, to the effect that no physicians should be employed as "*experts*," except such as are recognized by the Massachusetts Medical Society. It is very plainly seen that such legislation as this has but one aim and end, namely, to bring into ill repute, if possible, homœopathic physicians. Your committee, however, found it more than they could do, to get up such a record of legislation, and they turn it over to their successors. They would, however, urge, that in every State there should be a well-organized State Society, and that each State Society should have a well-organized and active Committee on Legislation.

On motion, the verbal report of the committee was accepted.

THE PRESIDENT then appointed the following

Committee on Legislation for 1875.

R. J. MCCLATCHEY, M.D., *Chairman*, . .	Philadelphia.
J. P. DAKE, M.D., ...	Nashville, Tenn.
I. T. TALBOT, M.D., ...	Boston.
T. S. VERDI, M.D., ...	Washington, D.C.
E. M. KELLOGG, M.D., ...	New York.
HORACE M. PAINE, M.D., ...	Albany, N. Y.
E. D. JONES, M.D., ...	Albany, N. Y.
W. H. WATSON, M.D., ...	Utica, N. Y.

THE PRESIDENT: The next business in order will be the report of the

COMMITTEE ON "THE WORLD'S HOMŒOPATHIC CONVENTION."

CARROLL DUNHAM, M.D., chairman of the committee, submitted the report, which was accepted and referred to the Committee of Publication. (Section I, Art. XXXVI.)

The following resolution was then offered, and unanimously adopted:

Resolved, That the Institute accept and adopt the report of the Committee of Arrangements of The World's Homœopathic Convention; and that it authorizes the Committee of Arrangements to proceed to execute the plans adopted by them.

E. M. KELLOGG, M.D., of New York: Mr. President, I desire, on behalf of the Trustees of the State Asylum for the

Insane, at Middletown, N. Y., to extend to you and the members of the Institute, an invitation to attend the ceremony of the formal opening of the asylum, on Thursday next, June 18th. This is the first State Asylum for the Insane that has been erected for our school of medicine. I trust to see the homœopathic profession well represented at the opening.

N. R. MORSE, M.D., of Salem, Mass., chairman of the committee, then presented the report of the

COMMITTEE ON CREDENTIALS,

Which was, on motion, accepted, and referred to the Committee of Publications. (Section I, Art. XXXVIII.)

I. T. TALBOT, M.D., of Boston, Mass., then presented the following report from the

INTERCOLLEGIATE COMMITTEE.

The committee authorized by the Institute beg leave to report, that they have organized by the appointment of members from the different colleges, as follows:

Hahnemann Medical College of Philadelphia.

A. R. THOMAS, Dean. H. N. MARTIN.

New York Homœopathic Medical College.

J. W. DOWLING, Dean. HENRY D. PAINE.

New York College and Hospital for Women.

MRS. C. S. LOZIER, Dean. S. LILIENTHAL.

Boston University School of Medicine.

I. T. TALBOT, Dean. DAVID THAYER.

Homœopathic Hospital College of Cleveland.

N. SCHNEIDER, Dean. H. H. BAXTER.

Pulte Medical College.

S. R. BECKWITH, Dean. J. D. BUCK.

Hahnemann Medical College and Hospital of Chicago.

J. S. MITCHELL, Dean. R. LUDLAM.

St. Louis Homœopathic Medical College.

E. C. FRANKLIN, Dean.

The committee have held meetings and have organized by the choice of the following officers, viz., David Thayer, Chairman; I. T. Talbot, Secretary. They have also adopted the following

RULES

Governing the Intercollegiate Committee, appointed June 11th, 1874, at the instance of the American Institute of Homœopathy.

1. The committee shall consist of the dean and one additional member from each college represented.
2. The duties of the committee shall be to organize and secure a uniform system of medical education in all the colleges of the country.
3. There shall be free and frequent communications between the members of the committee on matters pertaining to medical education and the common interests of the colleges.
4. There shall be a meeting of the committee at some time during each annual session of the Institute.
5. This committee shall make an annual report to the Institute.

Under this arrangement the committee hope to do much to add to the efficiency of the various colleges.

Respectfully submitted for the committee.

I. T. TALBOT,
Secretary.

On motion, the report was accepted, and referred to the Committee of Publication.

ELECTION OF OFFICERS.

The Institute then proceeded to elect officers for the ensuing year, commencing January 1st, 1875, with the following results:

President.

W. H. HOLCOMBE, M.D. . . . . New Orleans, La.

Vice-President.

L. E. OBER, M.D., ... La Crosse, Wis.

General Secretary.

ROBERT J. MCCLATCHEY, M.D., ... Philadelphia.

Provisional Secretary.

BUSHROD W. JAMES, M.D., ... Philadelphia.

Treasurer.

E. M. KELLOGG, M.D., ... New York.

Censors.

F. R. McMANUS, M.D.,	Baltimore.
N. R. MORSE, M.D.,	Salem, Mass.
C. G. HIGBEE, M.D.,	St. Paul, Minn.
C. S. ELDRIDGE, M D.,	Chicago.
H. F. BIGGAR, M.D ,	Cleveland, O.

DR. F. R. MCMANUS: In reading over the applications for membership awhile ago, one of them was objected to, and the application was referred back to the Board of Censors. It was the application of Dr. Burr, of Lansing, Mich., and it states that he is a graduate of the Michigan Homœopathic College at Lansing, of the year 1872. Now this gentleman, who is present, insists on having his application passed upon. He states that he received a license to practice medicine from the Otsego, N. Y., County Medical Society, in 1838, and that at that time there were but few medical colleges in the United States, and physicians were pronounced and recommended as qualified to practice by the county medical societies of the different States. He claims that he got a license to practice, which made him a "Dr." instead of "M.D.," which licensed him to practice only in the State which granted the license. He states that he practiced allopathy for one or two years, and retired from practice for seven years; the reason for which, according to his statement, was, that he was disgusted with the practice. After an interim of seven years, he commenced the investigation and practice of homœopathy—say about 1845, within one year of thirty years ago—since which time he has been practicing in accordance with that system. Two years ago he received a diploma from the college at Lansing; on that he claims to be admitted. He does not regard the license as of any importance. This college has now suspended, and has been superseded by the Detroit Homœopathic Medical College. The college has been objected to, on account of its having been what is commonly called of the mushroom sort; but there appear to be so many of these mushroom concerns, that it has become a difficult matter to single them out. Your Board of Censors ask you to take action on this application at once, either for the reception or rejection of the applicant.

DR. R. LUDLAM: I would like to ask one question. I have no

feeling at all concerning the applicant, and none regarding the college; but it has been said that the applicant, at the time of receiving his diploma, was a member of that college faculty. If this be true, it seems to me the diploma is not worth very much to him, nor is it very much of a guarantee for the college. I would a great deal rather take him on his medical certificate, if he has one. Forty years' practice ought to carry him right in without a diploma.

DR. S. R. BECKWITH: Let him make his application on his license.

DR. DAVID THAYER: The college seems to be an improper one for us to recognize. I, therefore, move, that the applicant be admitted on account of the great number of years he has practiced homœopathy, and on the certificate which allowed him to practice.

A DELEGATE: I second the motion of Dr. Thayer.

Dr. Burr was then given permission to speak in his own behalf.

DR. BURR: Mr. President and Gentlemen of the Institute, I come here as an applicant for admission to your honorable body, claiming to be a graduate of the Michigan Homœopathic College at Lansing. This is my only homœopathic collegiate record. I claim recognition here on no grounds that are not homœopathic. I claim to be a homœopathic practitioner, and on that I stand, asking for nothing from my allopathic record. I do not wish to be admitted here, unless I can be admitted on my homœopathic record. So far as the college from which I graduated is concerned, I may say that I hold in my hand a document issued by the Secretary of the State of Michigan, bearing the broad seal of that State upon it, which assures you of the legal existence, according to the laws of the State of Michigan, of the institution from which I graduated. If I cannot be admitted as a member of this body on that, I do not wish to be admitted at all. So far as my being a member of the faculty that graduated me is concerned, I would say that I lectured upon the subject of medical jurisprudence. I am licensed to practice law as well as medicine.

DR. DAKE: I would like to inquire, Mr. President, if the gentleman is a member of the State organization of Michigan?

DR. BURR: I am, and in regard to that I will say that I was one of the homœopathic physicians who organized the Michigan Homœopathic Institute. It was first organized in the city of Ann Arbor in the year 1846. At that time I had just commenced the practice of homœopathy, and helped to organize that institute. It has been remodelled two or three times since then, and it is the parent of this Michigan Homœopathic College.

DR. THAYER: I would like to ask the gentleman how long he has practiced homœopathy?

DR. BURR: Since 1846.

DR. THAYER: Are you in practice now?

DR. BURR: Yes, sir.

DR. THAYER: Inasmuch as this charter, which he has presented, bears the seal of the State, I move that he be admitted a member of this Institute.

DR. LUDLAM: I second the motion.

DR. I. T. TALBOT: With all due regard for a man who has practiced homœopathy so long as our friend who comes here and wishes to be associated with us, and with all due respect for his wishes in that direction, I am nevertheless constrained to say that we must stop a moment before we indorse every institution that comes up here, even with the broad seal of the State of Michigan. We have to be cautious in the matter. We may take him on his merits, but we need not necessarily indorse the institution. Now there are institutions that our friends from Philadelphia would tell us, can show the broad seal of that State, as broad as that of Michigan, that we have refused to recognize; and it is only in justice to our other colleges, who are doing the best they can to elevate medical education, that we should guard against giving the force and influence of this Institute in favor of those institutions got up by a few men for their own advancement, and which fall as quickly as they rise. I know but little of this Institute of Michigan. I know little of the Michigan Homœopathic Medical College. I know little of the Pennsylvania Medical University, or of that Philadelphia University which has scattered its diplomas all through the

country. I do know this, however, that we have a responsibility resting upon us that we cannot shrink from. If this applicant is to be received, I hope it will be plainly understood that it is done without the indorsement by the Institute of the college he comes from, or of any other institution that we know so little of.

DR. DAVID THAYER: Admit him on his merits then; by so doing we will not indorse his college. I withdraw my former motion, and now move that Dr. Burr be admitted to membership solely on his merits as a homœopathic physician of long standing.

Agreed to.

I. T. TALBOT, M.D., offered the following resolutions, which were unanimously adopted:

Resolved, That a vote of thanks be hereby tendered by the American Institute of Homœopathy, to the Press of Buffalo, Niagara Falls, and Rochester; to the Associated Press, and the American News Association, for the courtesies extended by them to the Institute, and for the efforts they have made to give careful and full reports of its proceedings; and to J. T. Fulton, Jr., proprietor of the International Hotel, Niagara Falls, for his courteous entertainment of the members of the Institute, and his careful attention to their comfort and enjoyment.

Resolved, That the Institute, at the close of its twenty-seventh session, present to its officers an expression of their cordial recognition of the untiring efforts successfully made by them, for the harmony, usefulness, and pleasantness of the session.

THE PRESIDENT then made some final remarks regarding the pleasure, harmony, and profit of the session. The President then invited the President elect, Dr. Holcombe, to address the Institute.

DR. W. H. HOLCOMBE, President elect, then addressed the Institute in eloquent terms.

On motion of N. R. Morse, M.D., the Institute then adjourned.

COMPLETE REPORT OF THE BOARD OF CENSORS.

NEW MEMBERS ADMITTED.

The following is a complete list of new members elected during the session, in accordance with the recommendation of the Censors, with the time and place of graduation of each.

ANDERSON, JEREMIAH, M.D., Rochester, N. Y.,	N. Y. Hom. Med. Coll., 1864.
ARTHUR, CHARLES, M.D., Scranton, Pa.,	Hom. Med. Coll. of Penna., 1866.
BAILEY, SILAS, M.D., Toledo, Ohio,	Berkshire Med. Coll. and Inst., 1835.
BAETHIG, HENRY, M.D., Buffalo, N. Y.,	Hah. Med Coll. of Philad'a, 1870.
BASCOM, HENRY M., M.D., Ottawa, Ill.,	Hah. Med. Coll. of Chicago, 1873.
BASS, EDGAR C., M.D., Cazenovia, N. Y.,	Albany Med. Coll., 1858.
BENNIT, WILLIAM W., M.D., Washington, D. C.,	N. Y. Hom. Med. Coll., 1873.
BIEGLER, JOSEPH A., M.D., Rochester, N. Y.,	University of Penna., 1857.
BOARDMAN, WILLIAM H., M.D., Pittsburg, Pa.,	St. Louis Med. Coll. of Phys. and Surgs., 1872.
BOND, MARY E., M.D., New York,	Eclectic Med. Coll., N. Y. City, 1873.
BOLLEN, GEORGE M., M.D., South Australia,	Hah. Med. Coll. of Chicago. 1870.
BOYNTON, FRANK H., M.D., New York,	N. Y. Hom. Med. Coll., 1874.
BRIGHAM, REEDER S., M.D., Cairo, Ill.,	Missouri Hom. Med. Coll., 1868.
BROWN, U. H., M.D., Syracuse, N. Y.,	N. Y. Hom. Med. Coll., 1873.
BROWN, CHARLES R., M.D., Lynn, Mass.,	N. Y. Hom. Med. Coll., 1873.
BRADNER, FREDERICK H., M.D., Middletown, N. Y.,	N. Y. Hom. Med. Coll., 1873.
BRYAN, EDWARD W., M.D., Ovid, N. Y.,	Cleveland Hom. Med. Coll., 1872.
BURNETT, WILLIAM W., M.D., Matawan, N. J.,	N. Y. Hom. Med. Coll., 1873.
BURR, EZRA D., M.D., Lansing, Mich.,	Michigan Hom. Med. Coll., 1872.
CAMPBELL, MERETT B., M.D., Joliet, Ill.,	Harvard Med. Coll., 1866.
CAMPBELL, HOWARD S., M.D., Philadelphia, Pa.,	University of Penna., 1867.
CARMICHAEL, JAMES A., M.D., New York,	University of New York, 1852.
COBURN, JESSE M., M.D., South Framingham, Mass.,	Boston University School of Med., 1874.
COON, HENRY C., M.D., Alfred Centre, N. Y.,	N. Y. Hom. Med. Coll., 1872.
CONANT, CLARENCE M., M.D., Cornwall-on-Hudson, N. Y.,	N. Y. Hom. Med. Coll., 1872.
COTTON, HENRY E., M.D., Buffalo, N. Y.,	Cleveland Hom. Med. Coll., 1872.
CLARK, JOSEPH N., M.D., Harrisburg, Pa.,	Med. Depart., Georgetown Coll., D. C., 1867.
CORBIN, JOHN L., M.D., Athens, Pa.,	Hah. Med. Coll. of Chicago, 1874.
CRANK, CHARLES D., M.D., Cincinnati, O.,	Hah. Med. Coll. of Philad'a, 1871.
CURTIS, R. J., M.D., Mayville, N. Y.,	Hah. Med. Coll. of Chicago, 1861.
DARLING, HENRY H., M.D., Keene, N. H.,	N. Y. Hom. Med. Coll., 1861.
DELAMATER, NICHOLAS B., M.D., Chicago, Ill.,	Hah. Med. Coll. of Chicago, 1873.
DUNN, J. L., M.D., Titusville, Pa.,	Cleveland Hom. Med. Coll., 1850.
EDDY, HIRAM L., M.D., Geneva, N. Y.,	Berkshire Med. Coll., Mass., 1835.
EDMONDS, WILLIAM A., M.D., Memphis, Tenn.,	Louisville Med. Inst., 1846.
EVANS, ALBERT J., M.D., Lockport, N. Y.,	Hah. Med. Coll. of Philad'a, 1871.
FORBES, GEORGE F., M.D., West Brookfield, Mass.,	Boston University School of Med., 1874.
FRANTZ, ALBERT J., M.D., Canoga, N. Y.,	Detroit Hom. Med. Coll., 1871.
FROST, HENRY C., M.D., Cleveland, O.,	Cleveland Hom. Med. Coll., 1874.
FULLER, EDWARD E., M.D., Buffalo, N. Y.,	N. Y. Hom. Med. Coll., 1874.
FULTON, HENRY W., M.D., Pittsburg, Pa.,	Hah. Med. Coll. of Philad'a, 1872.
GREGORY, EDWARD P., M.D., Milford, Conn.,	Hah. Med. Coll. of Philad'a, 1873.
GROSVENOR, LEMUEL C., M.D., Chicago, Ill.,	Cleveland Hom. Med. Coll., 1864.
GUERNSEY, WILLIAM N., M.D., New York,	University of New York, 1870.
HALL, ROBERT, M.D., Providence, R. I.,	Coll. Phys. and Surgs., N. Y. City, 1856.
HAMISFAR, CHARLES W., M.D., St. Mary's, O.,	Cleveland Hom. Med. Coll., 1871.
HAYWARD, ABNER, M.D., Mt. Clemens, Mich.,	Cleveland Hom. Med. Coll., 1866.

HOLLETT, ARTHUR P., M.D., Havana, N. Y.,	Hom. Med. Coll. of Penna., 1869.
HERRON, CHARLES D., M.D., Pittsburg, Pa.,	Hah. Med. Coll. of Philad'a, 1872.
HUNT, DWIGHT B., M.D., New York,	N. Y. Hom. Med. Coll., 1873.
JAYNES, A. W., M.D., Syracuse, N. Y.,	N. Y. Hom. Med. Coll., 1873.
JACKSON, W. H. H., M.D., Oil City, Pa.,	Western Reserve Med. Coll, Cleveland, O., 1868.
JONES, CHARLES E., M.D., Albany, N. Y.,	Albany Med. Coll., 1873. N. Y. Hom. Med. Coll., 1873.
JOHNSON, JOSEPH D., M.D., Hartford, Conn.,	Bellevue Med. Coll., N. Y., 1869.
KERN, WILLIAM H. C., M.D., McKeesport, Pa.,	Hah. Med. Coll. of Philad'a, 1874.
KELLOGG, EDWARD W., M.D., Hartford, Conn.,	N. Y. Hom. Med. Coll., 1867.
KNAPP, THEODORE S., Union, N. Y.,	Hom. Med. Coll. of Penna., 1854.
KNIGHT, EDWARD B., M.D., Providence, R. I.,	Harvard University, 1867.
KENYON, WILLIAM B., M.D., Buffalo, N. Y.,	Hah. Med. Coll. of Philad'a, 1874.
LAIRD, WILLIAM F., M.D., Watertown, N. Y.,	N. Y. Hom. Med. Coll., 1872.
LINNELL, JONATHAN E., M.D., Norwich, Conn.,	Med. Depart. Dartmouth Coll., 1845.
LIBBY, CHARLES A., M.D., Arlington, Mass.,	N. Y. Hom. Med. Coll., 1873.
MCLAREN, WILLIAM B., M.D., Oak Park, Ill.,	Hah. Med. Coll. of Chicago, 1870.
MCDONOLD, WILLIAM O., M.D., New York,	N. Y. Hom. Med. Coll., 1855.
MONROE, G. T., M.D., Mercer, Pa.,	Albany Med. Coll., N. Y., 1842.
MORRILL, CHARLES, M.D., Cleveland, O.,	Cleveland Hom. Med. Coll., 1855.
NICHOLS, G. F., M.D., Boston, Mass.,	Harvard Med. School, Cambridge, Mass., 1870.
OLMSTED, CHARLES C., M.D., Cleveland, O.,	Cleveland Hom. Med. Coll., 1860.
PEASE, GILES, M.D., Rockville, Conn.,	University of Penna., 1857.
PLIMPTON, CLARA C., M.D., New York,	N. Y. Hom. Med. Coll., 1874.
PRATT, E. H., M.D., Wheaton, Ill.,	Hah. Med. Coll. of Chicago, 1873.
RAMAGE, R. H. Y., M.D., Pittsburg, Pa.,	Cleveland Hom. Med. Coll., 1872.
REN-DELL, ADDIE L., M.D., New York,	Woman's Med. Coll. and Hosp., N. Y. City, 1873.
REED, MARO MCLEAN, A. B., M.D., Jacksonville, Ill.,	Middlebury Coll. and Vermont Academy of Med., 1826.
REMBAUGH, ALONZO C., M.D., Philadelphia, Pa.,	Hah. Med. Coll. of Philad'a, 1869.
RICE, WILLIAM B., M.D., Niagara Falls, N. Y.,	N. Y. Hom. Med. Coll., 1863.
SAXTON, WILLIAM DWIGHT, M.D., Cohocton, N. Y.,	Linde University, Chicago, 1865.
SCHERZER, WILLIAM, M.D., New York,	Hom. Med. Coll. of Penna., 1859.
SEYMOUR, ABBY J., M.D., Buffalo, N. Y.,	Hah. Med. Coll. of Chicago, 1873.
SCHENK, BENJAMIN B., M.D., Plainville, N. Y.,	Geneva Med. Coll., 1838.
SOVEREIGN, BAXTER, M.D., Yorkstown, N. Y.,	Cleveland Hom. Med. Coll., 1868.
SPITTLE, THOMAS F., M.D., Piqua, O.,	Cleveland Hom. Med. Coll., 1873.
STILES, HENRY R., M.D., Middletown, N. Y.,	Med. Depart. N. Y. University, N. Y. City, 1855.
SWIFT, CHARLES E., M.D., Auburn, N. Y.,	N. Y. Hom. Med. Coll., 1864.
TALCOTT, SELDEN H., M.D., Waterville, N. Y.,	N. Y. Hom. Med. Coll., 1872.
VERNON, ELIAS, M.D., Hamilton, Canada,	Jefferson Med. Coll. of Philad'a, 1852.
VOAK, JOSEPH B., M.D., Canandaigua, N. Y.,	Hom. Med. Coll. of Penna., 1865.
WAIT, PHŒBE JANE W., M.D., New York,	N. Y. Hom. Med. Coll., 1872.
WARD, A. FRANCIS, M.D., Jamestown, N. Y.,	Cleveland Hom. Med. Coll., 1860.
WALTON, CHARLES E., M.D., Cincinnati, O.,	Pulte Med. Coll., Cincinnati, O., 1874.
WATERS, HENRY, M.D., Mechanic Falls, Maine,	N. Y. Hom. Med. Coll., 1873.
WATSON, HENRY B., M.D., Glen Cove, L. I.,	L. I. Med. Coll. and Hosp., 1868.
WHEATON, JAMES L., M.D., Pawtucket, R. I.,	Berkshire Med. Coll., Mass., 1847.
WHITELEY, J., M.D., Oil City, Pa.,	Cleveland Hom. Med. Coll., 1873.
WORTH, SIDNEY, M D., San Francisco, Cal.,	N. Y. Hom. Med. Coll., 1874.
WRIGHT, H. AMELIA, M.D., New York,	N. Y. Hom. Med. Coll., 1874.
YEOMANS, CAROLINE J., M.D., New York,	N. Y. Hom. Med. Coll., 1868.

XXXIII.

TREASURER'S REPORT.

DR. E. M. KELLOGG, TREASURER, IN ACCOUNT WITH THE AMERICAN INSTITUTE OF HOMŒOPATHY. CR.

1873.			1873.		
June 5.	Cash balance in hand,	$331 64	June 8.	By Bill for Advertising in Baltimore,	$10 88
1874.			" 6.	By Bill, C. R. Morgan, Reporter,	210 00
June 8.	By Receipts from Members,	3166 00	" 17.	By Bill, Printing Receipts,	12 00
			Aug. 7.	By Bill, Rolls for Diplomas,	4 50
			1874.		
			April 4.	By Bill, Printing Notices,	5 00
			" 4.	Postage, Expressage, etc.,	93 03
			June 1.	Paid General Secretary's Bills for Editing, Printing, and Binding Transactions, Miscellaneous Printing, Postage, etc.,	2825 00
				Balance,	337 23
		$3497 64			$3497 64

XXXIV.

REPORT

OF THE

COMMITTEE ON A HOMŒOPATHIC DISPENSATORY.

THE committee respectfully report that the work of their respective subdivisions is substantially finished; most of it has been placed in the hands of the chairman, and arranged and classified by him, and the work of final revision and transcription can and will be taken in hand immediately after the present session.

The committee have reason to believe that this is the last time they will have to report progress, and that the work may be ready for circulation before the next session of the Institute.

In behalf of the Committee,

CARROLL DUNHAM, M.D.,
Chairman.

XXXV.

NECROLOGICAL REPORT.

By Henry D. Paine, M.D.,

Necrologist.

DAVID JAMES, M.D.

The sad news of the death of David James, M.D., was announced at the meeting of the Institute which was held at Cleveland last year, and was received with mournful interest by those who had been for so many years associated with him in the Institute; he being one of the veteran members, and held in high esteem for his professional and Christian life.

He was born March 14th, 1805, at Radnor, Delaware County, Pa., in the old mansion-house which had been the home of four generations of his ancestors. He was of Welsh descent, and it is probable that the force of character which he possessed was inherited from these hardy progenitors.

His father, Isaac James, M.D., was anxious that his son should adopt his profession, and he commenced a course of medical reading under his father's instruction. In November, 1826, he entered the Jefferson Medical College, then in the second year of its existence, having previously entered the office of Dr. George McClellan, the distinguished professor of surgery.

He graduated March 18th, 1828, and a few days afterwards his father removed from Philadelphia, leaving his practice to his son.

A year later Dr. James removed to Byberry, and became a partner of Dr. John Worthington. Upon the death of Dr. Worthington, a few years later, he succeeded to his entire prac-

tice, and by his devotion to his profession he soon attained a very high position.

In 1833 he married Miss Amanda Worthington, who still survives him.

About the time that Dr. James entered the medical profession as a practitioner, homœopathy as a system of medical practice was beginning to attract attention in this country. So late as 1840 but few physicians had adopted it, the hostility to it being so bitter, that not only the requirements of professional courtesy, but those of common politeness, were ignored by its opponents in their relations to its professed practitioners.

A number of Dr. James's patients, whom the old system had failed to cure, were treated successfully in Philadelphia under the new system, and he determined to look into a subject which showed such superiority.

In 1841 and 1842 he began to use the new method of prescribing, and did not at once abandon the old method; but he pursued a thorough course of study, and applied his knowledge gradually as he acquired it.

It could not be expected that his patients should have the same confidence that he professed, yet such was their trust in his integrity of purpose, that we have the best authority for the statement that not a single family withdrew from him, and his practice increased commensurately with his success.

In 1855 he removed to Philadelphia. His fame had preceded him, and in a short time he had a valuable practice as a visiting and consulting physician.

In 1841, he was licensed as a preacher in the Methodist Episcopal Church, and through all his professional career he devoted a portion of his time to religious work.

He was naturally of a cheerful disposition. His piety brightened his whole life, and his household reflected the spirit of it.

As an obstetrician he stood pre-eminent, and as a surgeon he had acknowledged skill.

His connection with the Institute dates from almost its beginning, and as all members who became such within two years of its organization are considered "founders," he was fairly and honorably entitled to that distinction.

The resolutions adopted by this body at its last session, on hearing of this bereavement, express the sentiments not of his surviving fellow-members only, but of all who were privileged to know him. See *Transactions*, 1873, p. 148.

Similar testimony to the high character of our departed colleague has since been given by the various societies with which he was connected.

At the ninth annual session of the Homœopathic Medical Society of Pennsylvania, held at Harrisburg, October 1st and 2d, 1873, the following resolutions on the death of Dr. David James were presented by Dr. R. J. McClatchey, of Philadelphia, and adopted unanimously by a rising vote:

Resolved, That in the death of Dr. David James, of Philadelphia, this Society recognizes the loss of one of its oldest and most highly esteemed members.

Resolved, That as an able exponent of Homœopathy, Dr. James has been deservedly held in high esteem, and that his many excellent qualities of head and heart had endeared him to all who shared the pleasure of his acquaintance.

Resolved, That the sympathies of this Society are hereby tendered the bereaved family of the deceased, and that a copy of these resolutions be properly engrossed and forwarded to them.

His family is still represented in the Institute and in the profession by his sons, Dr. Bushrod W. James and Dr. John E. James.

ISAAC JAMES, M.D.

The father of the preceding, the most venerable member of the Institute, and probably the oldest physician of our school in this country, has departed this life since the last meeting of the Institute.

It is rare that our necrological record of a single year includes the names of two such venerable and venerated members of one family, both remarkable alike for their high moral and religious character and their well-founded professional reputation.

The subject of this notice was, like the son after him, a native of Radnor Township, Delaware County, Pa., where a large estate has remained in possession of the family for four or five successive generations. He was born in 1777, about six months after

the declaration of our independence, and died January 22d, 1874, within a few days of the completion of his 97th year.

He received a good plain education in his youth, which he afterwards greatly improved by diligent application of a quick and retentive mind, and a habit of close observation. While still a lad he became deeply impressed on the subject of religion, and at an early age resolved to devote himself to the preaching of the gospel as a minister of the Methodist Episcopal Church. To this end he was ordained as deacon by the Rev. Mr. Asbury, in 1805, in which office he remained till, forty-three years later, he was advanced by Bishop Morris to the eldership. During all this interval he labored assiduously in the cause to which he was devoted, removing from place to place as opportunities for work and usefulness appeared to present themselves.

As a means of greater benefit to his fellow-men, he commenced the study of medicine, after he had attained to more than forty years of age, and graduated from the medical college in New York in the spring of 1825—the celebrated Dr. Hosack being then dean. The following year he commenced the practice of his newly acquired profession in Philadelphia, where his son David, the subject of the preceding sketch, was at that time pursuing his studies preparatory to the same calling. Having laid a good foundation for his son's success, soon after David's graduation he returned to Radnor with the rest of his family, leaving the city field to his son.

He remained in Radnor many years, actively engaged in practice, but continuing also to exercise his clerical office so far, at least, as to preach two or three times a week.

His son, Dr. David James, had been practicing according to the system of homœopathy several years before it seriously engaged his own attention. Though the principles and methods of the new school were often the subject of playful raillery on his part, he could not but acknowledge that, in the long run, the results were altogether much more favorable than the practice then in vogue could show. The recognition of that fact could only be, to a mind and conscience like his, a step and an incentive to further investigation. The conclusion of his inquiry and his personal trials of different remedies in his practice

was, of course, his thorough conversion to homœopathy, at the age of 67 years.

Both he and his son joined the Institute in the same year, 1846, soon after its organization, and both continued firm and consistent advocates and practitioners from that time onward.

Notwithstanding his advanced years, Dr. James continued in excellent health and in full possession of his faculties till within two or three years of his death. At the age of 94 his health and strength began to fail, but it was only very near the close of his long and useful life that he was confined to his bed or room.

He was a man of strictest integrity and uprightness. Honest and plain-spoken himself, he had an uncompromising hatred of pretence and every kind of sham. While firm and fearless in expressing and defending his own views, he was tolerant of the sincere opinions of those who differed from him.

His religion was of the cheerful kind, which not only brightened and enlivened his own character, but shed its gladdening influence on all around. No man knew better how to give advice without offence, or reproof without acerbity.

Of his large family of children, Dr. David James, the subject of the previous notice, and John F. James, late actuary of the Girard Life, Annuity and Trust Company, are dead. Another son, Thomas P. James, of Boston, is one of the most distinguished of living botanists.

ALPHEUS MORRILL, M.D.

Alpheus Morrill, M.D., the oldest and most widely known homœopathic physician in the State of New Hampshire, died at Concord, N. H., May 9th, 1874. Dr. Morrill was born at Canterbury, N. H., June 26th, 1808. He graduated from the medical department of Dartmouth College in 1832. The same year he married Miss Hannah M. Baker, of London, N. H., and commenced the practice of his profession in Chester, Ohio. Here he was afflicted by the death of his wife; after which he returned to London, N. H., where he married Miss Eliza A. Cate, and returned to Ohio in 1840. In 1843 his attention was called to the homœopathic system of medicine. At that time scarlatina prevailed in his neighborhood in a severe form, and

was very fatal under allopathic treatment. Dr. A. H. Burritt, then of Burton, Ohio, cured some severe cases that came under his notice, and provided him with homœopathic remedies, with which he cured all remaining cases. He then commenced the study of homœopathy in Dr. Burritt's office.

In 1845 he removed from Cuyahoga County to Columbus, Ohio, and introduced homœopathy in that city with great success. In 1848 he returned to New Hampshire, and settled in Concord. He assisted in forming the New Hampshire Homœopathic Medical Society, in 1853, and was its President till 1870. He became a member of the American Institute of Homœopathy in 1846, and was an honorary member of several leading medical societies in this country.

Though Dr. Morrill had been regarded as a most successful physician of the allopathic school, he always looked upon allopathic therapeutics with distrust and often with alarm. He felt that there ought to be some guiding principle or rule by which medicines could be administered. He knew that the administration of medicine by the allopathic school was almost wholly empirical, and in such large doses, that if it failed to do good it was almost sure to do harm. The uncertainty that thus hung over his practice was a constant source of anxiety; and it was his opinion, that in many diseases more would recover without medicines than with allopathic drugging. Thus he was in a state to investigate the claims of the homœopathic law of cure with faithfulness and candor. The result of that investigation filled his mind with delight. He started upon his new career not only with hope, but with enthusiasm; and to the end of his professional life was one of the most able and successful physicians our country has produced.

But his success was no matter of intuition. He was always most careful and painstaking in his practice. Gifted with a mind of uncommon reasoning powers, and thoroughly read in the best medical lore of his day, he still carefully analyzed all his cases, and then laboriously studied the Materia Medica, to be sure he had selected and applied the right remedy.

Of a commanding presence, his desire to do good and be instrumental in relieving suffering and removing disease was so

inscribed upon every feature as to win the confidence of his patients. In each of his different locations his success called around him a large number of patrons. The very large extent of his business increased his hours of labor, till for several years he applied himself to his business from nineteen to twenty hours a day, leaving but four or five for sleep. Exhaustion of the cerebro-spinal system, ending in softening, was the result of the strain from such overwork. He could walk with difficulty the last two years of his life, owing to a paralytic condition of his legs. During the last year of his life his mind was somewhat clouded in some of its departments, while other parts were bright and clear to the last. In his death the profession has lost one of its ablest defenders, and the community in which he lived a most valuable citizen.

CHRISTIAN FREDERICK GEIST, M.D.

Dr. Geist, a very early adherent of the Hahnemannian doctrine, and one of the veteran members of this Institute, was born in Hayn, near the Hartz, Germany, November 19th, 1805. After a short illness, his useful and laborious life was ended on the 27th of August, 1872. His attention was first called to homœopathy in 1831, when he became acquainted with a family who used this treatment when any member of it was ill. He also made the acquaintance of a very skilful German physician, Dr. Wohlleben, who had been practicing according to that method since 1825.

Urged by this gentleman and other friends, he began to study and to experiment with various medicines, trying them first upon animals, and afterwards upon himself and his friends. The success of the small doses gave him so much encouragement that he resolved to become a physician; and from that time he devoted himself entirely to the study of medicine.

For the purposes of experiment and practice he prepared the remedies himself, as many in those days were obliged to do. At first he employed white wafers properly medicated; afterwards he used pellets; and from the tinctures he ascended to the high

potencies, which, in after-life, he generally employed with remarkable success.

Dr. Wohlleben furnished him with books and all the tested remedies. So equipped, and with letters of introduction, he left Europe for America in 1835. In 1836 he went to Allentown, Pa., where Dr. Hering was at that time president of the newly established Academy of Homœopathy—the predecessor of all the existing homœopathic medical colleges in this country. Dr. Hering received him cordially, and encouraged him to remain in Allentown, and to prosecute his studies there. Dr. Geist considered himself very fortunate to be under the influence and guidance of so learned and capable an instructor. At the house of Dr. Hering he also had the pleasure of meeting some of the few able pioneers of homœopathy, who had assembled to consult upon the affairs of the Institution, namely, Dr. William Wesselhœft, Dr. Pulte, Dr. Freitag, Dr. Römig, and the Rev. Dr. Helfrich. There were also a few students, who afterwards graduated. The whole number was but small; nevertheless they had energy and perseverance, which have since told with wonderful effect in spreading homœopathy throughout the country. The course of study at the Academy was of great benefit to Dr. Geist. Afterwards he spent some years with Dr. William Wesselhœft, in Boston, for whom he felt the highest esteem and warmest friendship. He remained in Boston from 1840 to 1843, when he proposed to himself to start out upon a new career. Instead of remaining in that city where he was well and favorably known, and where he had many devoted friends, he removed to Lowell, Mass. There, however, he found unexpected difficulties to contend with, in consequence of a strong prejudice then existing in the place against homœopathy. And although his success in several prominent cases produced an evident revulsion in his favor and in favor of the system, he was dissatisfied with his prospects; and, having married in the meanwhile, he returned to Boston in 1845, where he regained his former good position and practice, and where he remained until his death, about twenty-seven years, enjoying throughout that long period the respect and esteem of his professional colleagues, and the love and admiration of the large numbers of sick to whom he unceasingly ministered. Few men

possessed in a more eminent degree, the happy faculty of winning and retaining confidence and inspiring hope. Dr. Geist became a member of the Institute in 1847 at the first Boston session.

Since the above was written, the following additional particulars respecting the family of our late eminent *confrère* have been obtained, which, it is believed, will increase the interest of the foregoing sketch.

The father of Dr. Geist was Forester of the Graf von Stolberg, and the position is still retained by his elder brother. His mother, a Hartmann by birth, was the daughter of a government assessor. His early education, which was very thorough, was obtained partly at the excellent public schools, and partly by private instructors at home. At thirteen he was sent to the High School at Stolberg, which ranks much the same as a college in this country. There he remained two years, and at fifteen resolved to study agriculture. Having, by a proper course of instruction in the principles of this art, qualified himself for the position, he successively held the position of superintendent of several extensive estates. For four years he resided in the family of Herr Kleemann, who had in rent the vast estates Fürstlich Schwarzburg Sonderhausensche Kammergut, where homœopathy was fully acknowledged, and where he made the acquaintance of Dr. Wohlleben, to whose influence we are chiefly indebted for Dr. Geist's accession to our ranks.

In 1844 Dr. Geist was married to Frederike Louise Martin, a native of Hamburg, Germany, but whose father was a Frenchman—well and favorably known as a sculptor in his day—and whose mother was from Malmö, the so-called garden of Sweden. This union was a singularly happy one, and was blessed with a son and two daughters, who, with their estimable mother, still survive to mourn the loss they have sustained by the death of their kind, loving, and generous father and husband.

JOHN ALSOP PAINE, M.D.

The following brief biographical notice of Dr. Paine, one of the original founders of the American Institute of Homœopathy,

who died in 1871, is taken from the tenth volume of the Transactions of the New York State Homœopathic Medical Society.

John Alsop Paine, M.D., was born in Whitestown, Oneida County, N. Y., July 10th, 1795. At nineteen years of age, an injury of the knee-joint, resulting in dropsy, caused him to relinquish the business of farming, and to engage in the study of medicine. He resided two years in the family of his uncle, Rev. William R. Weeks, D.D., while acquiring an academical education, and then commenced the study of medicine under the supervision of Dr. Seth Hastings, of Clinton, and graduated from the medical department of Yale College in the year 1825.

He commenced practicing medicine in Volney, Oswego County, and subsequently he resided in Paris, New Hartford, Utica, N. Y., Newark, N. J., and in Albany. He removed to Paris at the request of his uncle, whose ministerial labors as pastor of the Congregational Church were greatly interfered with by the members of the Methodist Church and society, the contest being between Calvinism on the one hand and Arminianism on the other. The principal representative of Arminianism was a physician named Judd, whose personal influence proved to be so great as to call for the presence of a physician of opposite religious views, in order to enable the adherents of Calvinism to maintain a prosperous and influential position. He remained a resident of the town of Paris while his presence and influence were required by his uncle. After a residence in Paris of four years, he followed his uncle to Utica, and subsequently to Newark, N. J., from which city he removed to Albany. In 1853, he removed from Albany, and located the third time in this county, remaining twelve years, seven near the village of New Hartford, and five in the city of Utica. In 1865, he removed for the third time to Newark, N. J., and in 1870, to Lake Forest, Ill.

He practiced the so-called allopathic system prior to 1843, and the homœopathic since that time. He was elected President of the Essex County (allopathic) Medical Society three successive times; became a member of the American Institute of Homœopathy in 1844; a fellow and corresponding member of the Homœopathic Medical College of Pennsylvania in 1853, and President of the Oneida County Medical Society in 1858. As a

practitioner, he exhibited several desirable mental characteristics. His influence over his patients was very positive, controlling them evidently by a strong magnetic power, which was accompanied by a most remarkable urbanity of manner. He also manifested considerable originality of method in determining the latent and active causes of disease, and in the proper adaptation and application of remedies.

During the last fifteen years of his life he gave particular attention to the treatment of the diseases peculiar to women, and introduced the mode of treatment by means of topical application of medicated cerates, which, in an improved manner of application, is now regarded by many eminent physicians as the most successful mode of management of those often intractable forms of disease.

SIMEON A. COOK, M.D.

Among the oldest and most highly esteemed practitioners of our school in Northern New York, was our late associate, Dr. Simeon A. Cook, of Troy—a member of the Institute since 1850.

He was born at Stillwater, Saratoga County, N. Y., on the 22d of February, 1803, and his whole life was passed within a few miles of that ancient and pleasant town.

Left an orphan in infancy, his childhood and youth were uncheered by many happy experiences, and at the age of fourteen he left his grandmother's farm to make his own way in the world.

By good fortune he was enabled to obtain admission to the Granville Academy, then and for many years quite celebrated as an educational institution, under the charge of the distinguished Salem Town. To the thorough and careful training of that excellent teacher he was indebted for the greater part of his general education.

After leaving this school, at about 18 years of age, he commenced the study of medicine, which he pursued under the successive instructions of Drs. Axtell, Langworthy, and Alden

March. He graduated in medicine at Castleton (Vt.) Medical College, in 1823, when scarcely 21 years old.

His first field of practice was in the town of Schaghticoke, N. Y., but after a few years he removed to Troy, and associated himself with his former preceptor, Dr. Langworthy.

From Troy he removed, after about three years, to Buskirk's Bridge, in the same county, where he found a favorable opening, and where he remained, enjoying to a large extent the confidence of the people. He was, however, induced to return to Troy in 1848, and continued there until his death, March 9th, 1873, at the age of 70 years.

For nearly twenty years—from 1830 to 1850—Dr. Cook was a frequent and welcome contributor to the allopathic medical journals, chiefly of Boston and Philadelphia. But in 1849, soon after his second removal to Troy, he was induced, chiefly by the representations and persuasions of Dr. R. S. Bryan of that city, to examine into the evidences, rational and practical, of the truth of Homœopathy. Like most others, when once induced to commence that investigation, Dr. Cook pursued it to conviction; but, unlike many who have reached the same conclusion and yet hesitate to express openly their change of views, he promptly avowed himself a convert, prepared a very excellent and candid statement of his reasons for publication in the *Boston Medical and Surgical Journal*, and in 1850 applied for admission to the American Institute of Homœopathy.

From this time he steadily and quietly devoted himself to the study and practice of the new method, to such good purpose as to secure the full confidence of a large circle of patrons and the respect of many of his former professional associates.

It is a subject of regret that the close application of his time and talents to his improvement in the resources of Homœopathy and their application in his large practice, left him little time for continuing his contributions to medical literature; a department of labor in which, as already hinted, he had formerly been very successful.

In 1856, Drs. Bryan and Cook became associated in practice, which arrangement continued very happily till the death of the former, in 1860. After that event he called to his assistance Dr.

W. S. Searle, now of Brooklyn, N. Y., who remained associated with him for three or four years.

In 1866 his general health became so much reduced as to necessitate his retirement from active practice. Since that time he has lived very quietly, unable to take more than a general interest in professional affairs, but always retaining the respectful regard, not only of his homœopathic colleagues throughout Northern New York, but of the profession generally.

Until the failure of his health, he was a steady and consistent promoter of all schemes for the extension of our school and the maintenance of its just rights, and a working member and supporter of the local medical societies.

WALTER MARTIN WILLIAMSON, M.D.

Dr. Williamson was the son of the late Dr. Walter Williamson, one of the founders of this Institute, and one of its most regular, earnest, and able members. The subject of this notice was born in Newtown, Delaware County, Pa., July 3d, 1836, and received a very complete literary and classical education at the Episcopal Academy in Philadelphia. His medical training was such as might be expected under the personal direction of so thorough a teacher as his accomplished father. He received his degree of M.D. from the Homœopathic Medical College of Pennsylvania, in 1857.

He commenced practice soon after his graduation, in Appleton, Wis., with such favorable prospects that he would probably have remained in the West, but for the partial failure of his father's health, which made his return to Philadelphia expedient, after some three years' active work in that rapidly growing State.

His association in practice with his father was of the greatest advantage to both. It continued until the decease of the latter in 1870, when the entire business of the firm devolved upon the son.

He joined the Institute in the very year of his graduation, and has been an active member of several other local and state medical organizations. In the Institute, he was chairman of the Bureau of Organization and Statistics. He was a frequent and

capable contributor to the periodical press of our school, and a man of fine literary taste.

All who attended the last session of the Institute that was held in Philadelphia, have reason to remember his untiring efforts for the comfort and pleasure of the members and their friends.

His death, which occurred after a brief illness, while still in the prime of his manhood, and in the full tide of professional success, cannot but be a source of regret, not only to the large circle of immediate friends and patients, but to the profession generally.

Dr. Williamson was married, in 1858, to Miss Mary P. Raymond, of Maine. His widow and several children survive him.

HENRY E. MORRILL, M.D.

This deservedly honored physician, a member of the Institute since 1858, departed this life on the 6th of March last, aged 61 years, leaving behind him, for the consolation and comfort of friends and relatives, an unsullied reputation and the record of a well-spent and useful life.

He was born in Boston, Mass., December 29th, 1813. Left an orphan at an early age, he was thrown upon his own resources before he had completed the first stages of his education. By dint of active industry and rigid economy he was, however, enabled to enter Philips's Academy, at Andover, and afterwards Amherst College. After leaving Amherst he was engaged for two years as private tutor in Mississippi. Overtures were then made to him to induce him to establish a seminary in Natchez. He had scarcely entered upon the enterprise, however, with every prospect of success, when an epidemic of yellow fever invaded the town and carried off many of the inhabitants, closing the schools, and spreading consternation throughout the neighborhood. Among the earliest victims was his own young wife, in the first week of her marriage. In a short time he was himself attacked, but after a long and severe illness recovered sufficiently to return North.

When restored to health he commenced the study of medicine.

He attended medical lectures in Cincinnati, Ohio, and in Philadelphia, graduating from the University of Pennsylvania in 1840. Returning to Ohio, Dr. Morrill established himself in Madisonville in that State, with fair success. In 1847 he removed to Brooklyn, N. Y., but for a time abandoned the practice of his profession for the drug business. It was while he was engaged in this occupation that his attention was seriously called to the claims and advantages of homœopathy, chiefly through the representations and persuasions of an intelligent nurse in his own family. He was thus induced to undertake an investigation of its principles and merits, with the result, of course, of a full conviction of their truth. His next step was to qualify himself by a thorough study of the practical methods and resources of the system, with a view to a resumption of his practice as a homœopathic physician. This he did in 1858, with such success that he was soon recognized as a skilful and popular practitioner, which reputation he maintained as long as he lived.

He devoted himself most industriously to his professional work, which steadily grew upon his hands and demanded and received his never-flagging attention.

He was withal modest regarding his own merits. As a friend he was constant and candid, ever mingling charity with truthfulness. Liberal in his benevolence and self-sacrificing in his professional attendance upon the poor, sincere and devout in his religious life, he was regarded by all who knew him as an example for imitation.

His final sickness, the result of a long-standing bronchial trouble, aggravated by hard work and exposure, was tubercular pneumonia. Although suffering much inconvenience and frequent interruptions in his labors for many months, he did not yield to the importunity of his family and friends so far as to give up visiting his patients until the beginning of the present year. For a time after that he continued to receive some patients in his room, but gradually growing weaker, even these efforts were found too great for him, and he steadily failed until the 6th of March last, when he passed away so quietly and withal so gradually that the moment of his departure was scarcely marked. As he lingered on the confines of this life, he remained for hours

in a peaceful rapture, catching glimpses, as it seemed to him and to his waiting friends, of the "other shore," and the "beautiful city" and its inhabitants. The vision was most assuring to him, for he said, as the darkness of death closed his eyes to the world, "I am not afraid," and so he died.

Dr. Morrill was thrice married. The death of his first wife, within a few days of their marriage, has already been referred to. His second wife was Cynthia Langdon, of Linwood, Ohio, who died in 1861. In July, 1863, he was married to Cordelia Warner, of Strikersville, N. Y., who survives him.

WILLIAM E. BULKLEY, M.D.

Although several years have elapsed since Dr. Bulkley died, his memory is affectionately cherished by the people among whom he faithfully labored for more than fifteen years.

He was born in Colchester, Conn., October 9th, 1796, and was the eldest of ten children. His early life was a continual struggle with difficulties, nobly and perseveringly sustained. At twelve years of age he was his mother's chief assistant in the management of the paternal farm, working diligently during the summer, and going to school in the winter. At eighteen he went to West Virginia, where he taught school, and studied medicine under a physician and surgeon of much eminence in that region.

Having accumulated the means to pay his expenses at the Yale Medical College, he returned home and attended medical lectures in New Haven. After leaving the college, and receiving authority to practice in 1826, he opened an office in his native town, where he also married. Finding little encouragement of business there, however, he removed to Tyringham, Mass., and subsequently to several other places, with varying success. In Hillsdale, N. Y., he remained twelve or fifteen years. Here he might have remained contented, and in the enjoyment of a fairly remunerative practice, had not his mind been disturbed by the intrusion of some evidences in favor of homœopathy, that induced or perhaps obliged him to pursue the investigation as to its real merits. Having satisfied himself of

its truth as a system, and its advantages as a method, he thought it expedient to seek another field for its practical exercise. It was then about 1855 that he removed to Danbury, Conn., where he began to practice as a homœopathist, and where he continued an earnest and firm defender of that system until his death, which occurred June 14th, 1870. He joined the Institute at Boston in 1859, and was a member also of the homœopathic medical organizations of his State and neighborhood.

A physician who knew him intimately for twenty-five years, writes that he always found him a noble, high-minded gentleman, and a good and judicious practitioner, who was universally esteemed in the community in which he lived.

GEORGE W. PERRINE, M.D.

Among those deceased members whose memorials should have been included in an earlier report, not the least deserving of special record is the name of Dr. George W. Perrine, who died April 20th, 1872, aged 55 years.

To an appreciative and just obituary notice contained in the *Investigator*, of Chicago, and written by our colleague, Dr. J. S. Douglass, of Milwaukee, we are indebted for the following facts:

Dr. Perrine was born at Lyons, N. Y., December 16th, 1816, graduated at Geneva Medical College in 1839, practiced his profession in Syracuse and Lyons in Central New York for sixteen years, after which he removed to Milwaukee, where he remained till his death. He had become a convert to homœopathy about two years before his removal to Wisconsin. During his residence in Milwaukee he had risen rapidly in the estimation of the profession and the public, both as a physician and surgeon.

He was tenacious of his principles, but charitable towards those who differed from him, and hence was on good terms with numbers of his allopathic competitors.

A significant circumstance worthy of record is that a call for a meeting of physicians of his city, to take measures in regard to his funeral, was responded to by nearly an equal number of each school, who resolved to attend the funeral in a body, and an equal number of each volunteered to act as bearers.

He was an active and valuable member of the Institute, and of various societies for the cultivation of medical science, and especially for the defence and promotion of homœopathy. He was a contributor of excellent practical papers to their Transactions, and was ever diligent in promoting harmonious co-operation among the members.

As a member of the Episcopal Church he was zealous and consistent, but not obtrusive. He possessed fine social qualities, which were thoroughly appreciated by the community in which he lived.

EDGAR B. COLE, M.D.

Edgar B. Cole, M.D., was born in Columbia County, N. Y., April 2d, 1826.

At the age of 15 he went to reside with his uncle, Dr. Harvey Cole, of Sprucetown, Columbia Co. Two years later he attended his first course of medical lectures at the Berkshire Medical College, at Pittsfield, Mass., and after the usual course of study, took his degree from that institution.

The year following he commenced practice as a homœopathist in the town of Easton, Washington Co., N. Y., and remained their seven or eight years, after which he removed to Waterford, where he lived fifteen years, and died November 10th, 1871, at the age of 45 years.

As a physician he ranked high in the profession and among his patrons. He had a large and extensive practice; his office business was not surpassed by any physician north of the city of New York. He made the treatment of chronic diseases a specialty, and acquired a high reputation by his success in their treatment.

He possessed a remarkable faculty of gaining and retaining the undiminished confidence of his patients, and as a citizen he had the respect and confidence of his townsmen. He was affable, genial, and sociable, and surrounded himself with a large circle of warm friends.

His death occurred after an illness of a few hours, and the event threw a whole community into consternation and lamentation.

He was a member of the order of Free Masons, and special resolutions were adopted by that body, and a letter of sympathy addressed to his wife, who was, by death, left desolate after a marriage of a few brief months.

An exquisite tribute was paid his memory, at his funeral, in a sermon delivered by the Rev. R. P. H. Vail, of Waterford; and at the meeting of the Homœopathic Medical Society of Northern New York, a biography of Dr. Cole was read by Dr. B. F. Cornell, of Fort Edward, from which most of the facts here given are extracted.

The following are the resolutions adopted by the Homœopathic Medical Society of Northern New York, at its annual meeting, July 9th, 1872. They truly express the sentiments entertained towards their colleague by the members of that Society, to all of whom he was most intimately known, and also reflect the general feelings of the community of the extensive region in which he practiced his calling.

WHEREAS, We learn with unfeigned sorrow of the sudden death of our esteemed associate, the late Dr. E. B. Cole, of Waterford; therefore,

Resolved, That while we bow with submission to the will of Providence, we deeply regret the dispensation that has so unexpectedly removed our friend and brother practitioner.

Resolved, That we feel bound to testify that by his gentle and affable demeanor, his skill, faithfulness, untiring industry, and thorough qualifications as a physician, he had endeared himself to a large circle of personal friends, and had secured the confidence of the community in which he lived.

Resolved, That by his death the medical profession in this vicinity has lost an able and eminent representative, the town a distinguished and upright citizen, and his family a genial and loved companion.

Resolved, That a copy of these resolutions be entered on the minutes of th Society, published in the daily papers, and presented to the family of the deceased.

Similar action was taken by the New York State Society of our school, and by several other associations with which Dr. Cole was connected.

EUGENE BITELY, M.D.

Eugene Bitely, M.D., of Paw Paw, Michigan, was elected a member of the Institute in 1870. He was originally from

Saratoga County, N. Y., where he was born, April 17th, 1824, and where he resided until 1852. After completing his academic education, he commenced the study of medicine, first in the office of an allopathic physician in his neighborhood, and subsequently under the direction of Dr. Cornell, of Fort Edward. The particular circumstances that led him to adopt the "new departure" are not known to the writer; but no one who knew him would doubt that the change of views was the result of well-founded convictions.

At intervals during the next few years, he occupied himself in teaching, until 1852, when he entered the Homœopathic College at Cleveland, of which he was a student at the time that an assault was made upon the institution by a misguided and infuriated mob. He took an active and vigorous part in the defence of the building, and opposed making any concessions to the assailants. A correspondent, who participated with Dr. Bitely in this fight, says, "The way he dealt sturdy blows to the desperate crowd, convinced me that he could handle, skilfully and forcibly, large as well as small pills."

After receiving his degree at Cleveland, he settled in Paw Paw, but acted as demonstrator of anatomy in the Cleveland College during the winters of 1854 and 1855.

In the practical duties of his profession he was unremitting and remarkably successful. The courage, decision, and persistence that marked his conduct while a student, was so evident in his manner of dealing with disease, that he at once inspired confidence, and soon secured the rewards of public approval as a skilful physician who knew what he was about. If he was clearheaded in judgment and prompt in action, he was also kind and tenderhearted to the sick, and generous and charitable to the poor.

While still in the activity of life and in the full tide of professional success, he was abruptly stopped in his career of usefulness by a brief but severe sickness, which terminated within ten days of the attack, on the 31st of March, 1873, in the fiftieth year of his age.

He left a widow and three children, but the mourning for his sudden departure was by no means confined to his own surviving

family. Throughout the community in which he labored, his memory will long be tenderly cherished.

ALFRED ZANTZINGER, M.D.

This meritorious member of our Society was less known among us than he deserved to be. Those few who enjoyed an intimate acquaintance with him, recognized his many admirable qualities, and regretted the invincible reserve that prevented his taking the active and useful part in our proceedings that would have been readily accorded to his abilities and learning.

He was born in Philadelphia, June 27th, 1839, graduated in arts in 1859, and in medicine in 1862. In 1867 he was made a member of the Institute; and in August 16th, 1873, he died.

In January 1863, he was married to Miss Sarah Crawford Clark, of Philadelphia, who survives him.

Dr. Zantzinger was possessed of fine abilities, and soon placed around him a large circle of friends and patients. His tendencies were all toward the lower and lowest potencies in the cure of disease, and his belief in this particular he openly and honestly espoused, and defended whenever an occasion offered. Dr. Zantzinger's chief peculiarity consisted in his love for domestic animals. This was his ruling passion from boyhood, and as he grew to manhood it increased with him, until it occupied all of his spare time. Numbers of birds, dogs, and horses were always in his possession, these always being of peculiar breeds and of rare qualifications.

Immediately before the illness which caused his death, indeed, a few days before that sad event, he had contemplated a journey of many hundred miles to examine into the pedigree of a favorite horse.

His attachment and attention to his mother was a beautiful feature in his character, which, together with his domestic qualities, have rendered his loss keenly felt by those who knew his worth.

He had few personal professional friends, but these were very dear to him, and in their society he seemed perfectly satisfied, without a more extended acquaintance. His death was sudden and unexpected; he was recovering slowly from an attack of ty-

phoid fever, and expected soon again to resume his duties, when alarming symptoms made their appearance, and he sank rapidly into the arms of death.

MILES W. WALLENS, M.D.

Dr. Wallens was born in Philadelphia, July 15th, 1842, and had a liberal education, and graduated with honor at the Philadelphia High School, in his seventeenth year. During the same year (1859) he entered the office of Drs. Richard and Daniel R. Gardiner, for the purpose of studying homœopathic medicine. He pursued his studies with much energy and perseverance, and attended three courses of lectures at the Homœopathic College of Pennsylvania, and graduated in the spring of 1862. He located and remained in Philadelphia till December of the same year, when he moved to Woodstown, Salem County, N. J., where he made for himself a large and lucrative practice. In 1867, finding that his health was suffering from close application to his practice, he went to Europe, visiting the Paris Exposition and several of the European kingdoms, and returned to Woodstown. In 1870 he moved to Somerville, thinking the climate would prove more congenial to his health. His practice soon became very extensive and laborious, under which his health still continued to fail, and he was obliged to relinquish it, and went to Minnesota in the winter of 1872, remaining almost all the time till the fall of 1873, when he returned to his home in Somerville, and died January 4th, 1874, of phthisis pulmonalis.

Dr. Wallens was a man of high moral and religious principles. He made a profession of religion when but twelve years old, and joined the Baptist Church, following its teachings during his life. He was a strict homœopath, doing credit to the profession and justice to his patients. His achievements as a surgeon were equal to any of the present day who from necessity combine a surgical and medical practice. While at Somerville, he performed an operation in plastic surgery which none of the best surgeons could have excelled.

He died at the early age of thirty-two years, mourned for alike by his family, professional brethren, and the community in which he was known.

DAVID R. STOUFFER, M.D.

The subject of this notice was one of the younger class of members, having been elected in 1871. He was, however, a man of more than ordinary promise, and there is every reason to believe that, had his life been spared, he would have amply justified the expectations of his friends as an able and successful exponent of homœopathy, of which he was an enthusiastic advocate.

Dr. Stouffer was born near Chambersburg, April 23d, 1850; graduated from the Hahnemann Medical College of Philadelphia in 1871; and died of phthisis pulmonalis, March 16th, 1874.

Commencing his professional career in Shippensburg, Pa., under the most favorable auspices, and with energy stimulated by an intense enthusiasm for a medical system the benefits of which he had repeatedly experienced in his own person, he was rapidly building up an enviable reputation as a successful practitioner, when the insidious disease of which he subsequently died began to affect his health, and soon compelled him to abandon the labors which he entered upon with a zeal and earnestness too great for his naturally sensitive and not over-vigorous constitution.

An appropriate tribute to his memory was prepared by his former preceptor, Dr. Benjamin Bowman, of Chambersburg, and read before a late meeting of the Cumberland Valley Homœopathic Medical Society.

THOMAS B. BENEDICT, M.D.

Thomas B. Benedict, M.D., of Ionia, Mich., was a native of Orange County, N. Y., where he was born March 28th, 1829, of a well-known family long resident in that vicinity.

Having removed with his family to Michigan while still young, his education was completed in the university of that State, at Ann Arbor. While a student there he became interested in medical science, and especially in the claims of homœopathy as a great and much-needed reform. The attention that he then

gave to the controversy as to the merits of different medical systems, resulted in a determination to pursue the investigation in a thorough and systematic way, and to adopt the practice of medicine as a profession. With these objects in view, he entered the Homœopathic Medical College at Cleveland, soon after his graduation from the university, and diligently pursued the liberal course of instruction there furnished. From this institution he received his doctorate in 1861, and soon after established himself as an avowed homœopathic physician, in Ionia, Mich. The system was little known in the neighborhood, and less understood, at the time of his settlement there; but as a natural result of his skillful application of the means afforded by it, he gradually succeeded in overcoming prejudice and establishing it firmly in the popular estimation.

In 1863 he married Miss Sarah Whipple. He remained in Ionia, actively and faithfully pursuing his calling, until his decease, which occurred March 1st of the present year. He was elected a member of the Institute at Cleveland, in 1873.

Although his connection with the Institute was brief, he was well known and highly esteemed for his professional and social character by many of its members, especially in his own State. He leaves a widow and an only son.

JAMES H. AUSTIN, M.D.

This worthy representative of our school died March 27th, 1873, seven days only after giving up practice.

He was born in Suffield, Conn., A.D. 1824. After a thorough preparatory education, he commenced the study of medicine when about twenty years of age, and graduated from the Berkshire Medical College in 1847. He located in Bristol the following year, and with the exception of a single year, remained in the same place, and in the active exercise of his profession as long as he lived, twenty-five years.

For the first ten years he was firm in his allegiance to the medical principles in which he was educated. By the end of that time, however, experience had considerably shaken his first faith, while at the same time some observations that had pre-

sented themselves unbidden, had gradually disabused his mind of the old prejudice he had entertained against homœopathy. Not satisfied to settle the questions in dispute between the two schools by a mental process merely, he tested the matter practically, and was not long in determining his own line of duty.

After satisfying himself of the superiority of the homœopathic method, he had the moral courage to avow at once and openly his change of opinion, and set to work to qualify himself to practice accordingly. After about 1857 or 1858, he was as earnest and zealous in the study and practice of homœopathy, as he had before been in the "old school" methods.

For several weeks before being taken down by his final sickness, he had been engaged in very exhausting and anxious labors, in attendance on a number of cases of cerebro-spinal meningitis. While worn down by these severe duties he was suddenly seized with a sickness of great severity; violent pain in his stomach with persistent vomiting for many hours, and his face covered with a cold sweat; considerable abdominal sensitiveness, and great prostration. For two days before death he had "coffee-grounds" ejections. His sickness and death apparently resulted directly from his exhausting labors, and exposure in attending upon the numbers of sick and suffering; a kind of martyrdom that the world generally does not appreciate.

In his social as well as in his professional character, Dr. Austin was a man of whom all spake well. He did not restrict his attention to professional interests alone, but was active and enterprising in all local and political subjects. He was repeatedly elected to the legislature of his State, and served the public in all such functions with entire satisfaction.

THOMAS JEFFERSON VASTINE, M.D.

Thomas J. Vastine, M.D., late of St. Louis, Mo., was born in Northumberland Co., Pa., October 6th, 1808. His parents being in comfortable circumstances, he received a good education, mostly obtained in the Danville Academy, Danville, Pa. On leaving that institution, where he bore himself with much distinction, he

entered the office of Dr. Petriken, of Danville, for the purpose of reading medicine. Having duly prepared himself for a collegiate course he entered the Jefferson Medical College, of Philadelphia, as a private student of Dr. McClellan, professor of surgery in that institution. He graduated with honor in 1829, and shortly afterwards commenced practice in Cattawissa and Bloomsburg, Columbia Co., Pa., and there remained until 1835, when he re-removed to Williamsport, Lycoming Co., Pa.

About the year 1847 he was led first to inquire into, and eventually to embrace homœopathy, through the influence of the late John Redman Coxe, Jr., of Philadelphia. In the following year he removed to St. Louis, Mo., and associated himself in practice with Dr. J. T. Temple. In 1851 he graduated from the Homœopathic Medical College of Pennsylvania, and immediately returned to St. Louis, where he continued in active practice until his death in 1872. This resulted from hemorrhage of the lungs, brought on by injuries received a few months previously by being thrown from his buggy. For several years he was president of the St. Louis Homœopathic Medical Society. He held the chair of clinical medicine in the Homœopathic Medical College of Missouri for a number of years, and as such he was highly esteemed by his colleagues and students. Dr. Vastine was a kind and affectionate man, generous and liberal to all worthy of his gifts. Although overworked by an extended practice, he never turned away from the poor. This made his death, which was a great loss to the community and profession, peculiarly deplored by the poor. During an active practice of nearly half a century, he won the respect and esteem of all with whom he came in contact, and left hosts of friends behind to bear testimony to his kindly and unaffected, but effective beneficence. He became a member of the American Institute of Homœopathy in 1857.

At a meeting of the St. Louis Homœopathic Medical Society, held a few days after his death, the following preamble and resolutions were passed.

ST. LOUIS, MO., March 13th, 1872.

At a general meeting of homœopathic physicians of the city and county of St. Louis held this day, the following preamble and resolutions were adopted.

WHEREAS, It pleased God Almighty in His infinite wisdom and love to remove from us our friend and colleague, T. J. Vastine, M D., therefore be it

Resolved, That by the death of Dr. T. J. Vastine, we lose one of our most efficient co-laborers and advocates of the homœopathic principle; a brother distinguished by his noble character, his pure morals, and scientific acquirements; a friend who with an indefatigable zeal and a self-sacrificing labor, made it a pleasure to himself, regardless of his own infirmities, to diminish physical misery and to bring help and consolation into the families of the afflicted.

Resolved, That in parting with our esteemed friend and colleague, we feel the deepest regret, and tender to the bereaved family our heartfelt sympathies.

Resolved, That these resolutions be published in one English and one German paper, and a copy of them be furnished the family of the deceased as a token of our regret for the departed one, and an expression of our sympathies with them in their bereavement.

Resolved, That these resolutions be spread on the minutes of the Homœopathic Medical Society of St. Louis, and a synopsis be communicated to all Homœopathic Medical Journals of the United States.

Signed, JOHN HARTMANN, M.D.,
Chairman Committee.

XXXVI.

REPORT

OF THE

COMMITTEE ON THE WORLD'S HOMŒOPATHIC CONVENTION.

THE Committee on The World's Homœopathic Convention respectfully present the following report:

. . . The committee have adopted and they recommend to the Institute to sanction and adopt the following plan for conducting The World's Homœopathic Convention:

1. That the American Institute of Homœopathy meet in 1876 in Philadelphia as "The World's Homœopathic Convention under the auspices and control of the American Institute of Homœopathy;" and that the date of the meeting be determined at the Annual Meeting of the Institute in 1875.

2. That the bureaus and committees of the Institute which shall be appointed in 1875 shall present their usual reports at the regular meeting of the Institute in 1877; and that, in 1876, in place of the reports and discussions of the bureaus and committees of the Institute, the World's Convention receive the reports and discussions of essayists and debaters of our own and foreign countries, to be appointed by the Committee of Arrangements.

3. That the Transactions of the World's Convention be published in a handsome bound volume, to be distributed among the members of the Institute and their foreign guests; and that the expenses be paid by the Institute.*

CARROLL DUNHAM, M.D.,
Chairman.

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* The Institute, by a unanimous vote, passed the following resolution:

"*Resolved*, That the Institute accept and adopt the report of the Committee of Arrangements of the World's Homœopathic Convention, and that it authorizes the Committee of Arrangements to proceed to execute the plans adopted by them."—GEN. SEC.

XXXVII.

REPORT

OF THE

COMMITTEE ON HOMŒOPATHIC COLLEGES.

THERE are nine homœopathic colleges in the United States, located in Philadelphia, New York, Chicago, St. Louis, Cleveland, Cincinnati, Detroit, and Boston.

In the *Hahnemann Medical College of Philadelphia*, the ordinary two years' course is obligatory; but the three years' graded course is recommended by the Faculty. The class of the first year is called the Philosophical Class, that of the second year the Theoretical Class, and that of the third year the Practical Class. The student who attends this course is required to pass an examination after having attended the first before he can be admitted to the second class.

Its number of matriculants the last year was 111; its number of graduates 26. Its lecture term is five months. This college has a *Preliminary Course*, of two weeks, in which physicians outside of the Faculty address the students. This college has an ample anatomical museum, and a library of about 2000 volumes. It has good hospital accommodations, and abundant material for clinical instruction. The lying-in department of the hospital gives opportunity for experience in midwifery.

The hospitals admitting homœopathic students on equal terms with allopaths, where clinical instruction is given in medicine and surgery, are the Pennsylvania Hospital, which contains about 500 beds; the Blockley, which contains 1000 beds; and Wills' Hospital for Diseases of the Eye, where clinics are held every day.

The college gives three prizes, aggregating a value of $150, and the professors give individual prizes, amounting to over $100, in addition.

The *New York Homœopathic Medical College* has adopted the graded course of three years. The connection of this college with the New York Ophthalmic Hospital, where the eye and ear clinics are the best in America, gives the student great advantages in the cultivation of ophthalmic and aural surgery. The classes are denominated the Junior, Middle, and Senior Classes. Its number of matriculants was 106; its graduates 26. The lecture term is five months.

The *New York Medical College for Women* insists on the three years' graded course. Its lecture term is five months. Its matriculants were 25; its graduates 7. It has a short summer term.

The *Pulte Medical College*, of Cincinnati, matriculated the last year 50 students, and graduated 16. The lecture term of this college is five months. More than six hundred lectures were delivered last year, and the classes had the advantages of the daily clinics of the Cincinnati Hospital. There was also established a daily clinic at the college, between the hours of 2 and 3 P.M., which afforded abundant material for the clinical lectures.

The degree of Fellow of the Pulte College was conferred upon three gentlemen who had already received the degree of M.D., the examinations for which were conducted in writing.

The effort is being made to institute the most thorough course of clinical instruction at this college, under the belief that students so taught will enter the field of practice far better equipped than when didactic instruction is the principal method employed; and for this purpose the Cincinnati Hospital and the Cincinnati Homœopathic Dispensary afford the most ample means, as the reports from those institutions will show.

The *Cleveland Homœopathic Hospital College* has a graded course of three years. It is open for both sexes. It matriculated 65, and graduated 33.

In this college preliminary examinations are required. It has homœopathic hospital clinics twice a week. Its lecture term is five months. The faculty gave five lectures a day, including clinic and hospital instruction, during the last session.

The *Detroit Homœopathic Medical College*, now in its fourth year, with a full corps of teachers, is in successful operation, having graduated 23 students at its last session, out of a class

of 54, and having already an equal number of students engaged for the new class.

From the necessity of the case, the fees are made the same as in the medical department of the Michigan University, and hence are much lower than those of medical colleges in general.

The *Hahnemann Medical College of Chicago* is connected with the Hahnemann Hospital of that city. It adopts, by recommendation, the three years' graded course, but permits those who decidedly prefer the former two course plan, to attend and become candidates under the old *regime*.

The class of 1873–4 numbered 76 students—65 males and 11 females—with twenty male graduates and one female graduate. Over seven hundred lectures were delivered in the hearing of the class.

The lecture term includes five months. A certificate of good moral character and sufficient preliminary attainments is required of each student, which is the best can be done until some suitable status of preliminary attainment is decided upon by the American Institute, to be adopted by all the colleges.

The curriculum of instruction is divided into fourteen departments, and is made as nearly perfect as possible.

The hospital clinics are open to the class, as well as the general dispensary of the college.

Boston University School of Medicine, the youngest in our family of nine, is a graded school of three years, but admits students to examination for the degree under the old *regime*. It is open to both sexes. Its matriculants were 78, its graduates 5. The framework of the curriculum of this school is that recommended by the Committee on Colleges last year.

With the experience of one year, the faculty in this young institution view with satisfaction the workings of the new system, and confidently hope that all the colleges in this country, after due consideration and experience, will find the graded course with preliminary examinations preferable to the old system, which, if not entirely abandoned, may be considerably improved upon.

From the *St. Louis (Mo.) Homœopathic Medical College* no report has been received.

It is earnestly urged on all the colleges that a good preliminary English education, including grammar, geography, arithmetic, natural philosophy, and the elements of geometry and algebra, and so much knowledge of the Latin and Greek languages as is necessary to enable the student to easily comprehend the etymology of the technical language of the profession, shall be required. In order to meet the necessities of those who present themselves for matriculation without a knowledge of these languages, a competent teacher of both the Latin and Greek should be provided by the colleges, and no student should be fully matriculated till he shall have been satisfactorily examined in these branches.

Without these, no student can get the full benefit of lectures on most of the subjects ordinarily taught in the medical colleges.

If a student knows more than these, if he has taken the first degree in the arts, he certainly should be credited therefor. He will of course begin with an advantage over those whose preliminary education barely reaches the requirements of the college. They should be graded according to attainments. Preceptors should require students to cultivate these branches during the first year of office study, while they are preparing for the lectures; otherwise they will be neglected altogether, to the incalculable disadvantage of the student during his whole life.

Now, the ignoramus and the college graduate well versed in science, languages, and the arts, take their seats together on the same benches as first-class students. As the case now is, they both hold the same grade.

The true grading belongs here. We should examine these last-named for advanced standing. Those students of the lowest grade should be required to take a third course. This should be made compulsory in all cases of preliminary deficiencies. Yet we are not quite prepared to say that this is practicable, unless the American Institute shall approve it, and all our colleges adopt it. Then it will be an accomplished fact.

Every student should first pay his fees, then be examined, and on this his status be fixed—being required to attend one, two, or three courses, according to the result of the first examin-

ation; subject of course to change or modification, according as the last and final examination may be more or less satisfactory.

With the consent of *all* the colleges this plan could be easily carried out, and no one would have reason to complain. Your committee would recommend to all the colleges that the lecture term should not be shortened below five months, and that a summer term of three months, in April, May, and June, be held for those students who prefer to be under the instruction of the college rather than to return to their preceptors. During these months the time could be profitably spent in the proving of medicines, in reviewing, in recitations, and in the various branches taught during the winter term; also in special lectures, clinics, hospital and laboratory work, and in botany.

As the prosperity of this Institute must largely depend on the character and qualifications of its members, as well as on the character of the colleges by which they are accredited as physicians, your committee would recommend the passage of the following resolution:

Resolved, That the American Institute of Homœopathy cordially and earnestly recommend to all the homœopathic colleges in this country to adopt a uniform system of education and requirement. And to this end would further recommend to each homœopathic college to appoint one or more members of its faculty to constitute an intercollegiate committee, whose duty it shall be to recommend and adopt such rules of comity and other measures as will further the above object.

And your committee further recommend, in case the above resolution be adopted, that the members of the various college faculties now present hold a meeting at once, for the purpose of organizing such intercollegiate committee.

On behalf of the committee,

DAVID THAYER, M.D.,
Chairman.

XXXVIII.

REPORT

OF THE

COMMITTEE ON CREDENTIALS.

NIAGARA FALLS, June 12th, 1874.

TO THE MEMBERS OF THE AMERICAN INSTITUTE OF HOMŒOPATHY:

Your Committee on Credentials would respectfully submit the following as their report.

MEMBERS PRESENT AT THE TWENTY-SEVENTH SESSION OF THE AMERICAN INSTITUTE OF HOMŒOPATHY.

Members, Delegates, and Visitors.

Alabama.

F. F. DE DERKEY, Mobile.

Connecticut.

G. H. WILSON, West Meriden.
HENRY E. STONE, Fair Haven.
LOUIS DE V. WILDER, Hartford.
H. M. BISHOP, Norwich.
E. C. CROFUTT, Hartford.

Illinois.

R. LUDLAM, Chicago.
A. E. SMALL, Chicago.
D. S. SMITH, Chicago.
W. H. WOODYATT, Chicago.
G. A. HALL, Chicago.
M. J. CHASE, Galesburg.
L. C. GROSVENOR, Chicago.
E. H. PRATT, Wheaton.
R. P. WELLS, Lanark.

Iowa.

G. H. PATCHEN, Burlington.

Indiana.

J. B. HUNT, Indianapolis.
WILLIAM EGGERT, Indianapolis.

Louisiana.

W. H. HOLCOMBE, New Orleans.

Maine.

D. P. FLANDERS, Belfast.

Maryland.

F. R. McMANUS, Baltimore.
THOMAS SHEARER, Baltimore.

Massachusetts.

J. H. WOODBURY, Boston.
I. T. TALBOT, Boston.
C. WESSELHŒFT, Boston.
N. R. MORSE, Salem.
W. H. LOUGEE, Lawrence.
C. W. SCOTT, Lawrence.
D. THAYER, Boston.
D. HALL, Lowell.
E. U. JONES, Taunton.
L. ALVORD, Chicopee Falls.
G. W. SWAZEY, Springfield.
T. DWIGHT STOW, Fall River.
C. H. FARNSWORTH, E. Cambridge.
H. E. SPAULDING, Hingham.
D. B. WHITTIER, Fitchburg.
M. B. JACKSON, Boston.
G. F. FORBES, West Brookfield.

Michigan.

A. H. BATSFORD, Grand Rapids.
J. I. WHITFIELD, Grand Rapids.
C. W. PRINDLE, Grand Rapids.
ABNER HAYWARD, Mount Clemens.
E. D. BURR, Lansing.

Minnesota.

C. G. HIGBEE, St. Paul.
J. T. ALLEY, St. Paul.

Missouri.

W. A. HYDE, Springfield.

New Jersey.

J. J. YOULIN, Jersey City.
E. W. SOUTH, Plainfield.
GEORGE M. OCKFORD, Hackensack.

New Hampshire.

J. F. WHITTLE, Nashua.
W. H. W. HINDS, Milford.

New York.

CARROLL DUNHAM, Irvington.
P. P. WELLS, Brooklyn.
T. F. ALLEN, New York City.
W. T. HELMUTH, New York City.
E. M. KELLOGG, New York City.
A. M. WOODWARD, New York City.
S. LILIENTHAL, New York City.
A. L. BALL, New York City.
H. C. HOUGHTON, New York City.
J. ENSIGN, New York City.
A. R. WRIGHT, Buffalo.
R. GREGG, Buffalo.
T. L. BROWN, Binghamton.
S. SWAN, New York City.
A. J. SEYMORE, Buffalo.
S. H. TALCOTT, Waterville.
E. C. BASS, Cazenovia.
E. S. COBURN, Troy.
J. W. SHELDEN, Syracuse.
E. D. JONES, Albany.
J. HORNBY, Poughkeepsie.
E. G. COLTON, Buffalo.
P. O. C. BENSON, Skaneateles.
W. M. GWYNN, Throopsville.
G. B. PALMER, East Hamilton.
C. A. CHURCH, Norwich.
L. M. KENYON, Buffalo.
R. B. COVERT, Seneca Falls.
N. B. COVERT, Geneva.
CORNELIUS ORMES, Jamestown.
R. E. MILLER, Oxford.
J. T. GREENLEAF, Owego.
W. J. BRYAN, Corning.
A. B. SOUTHWICK, Rome.
H. V. MILLER, Syracuse.
C. SUMNER, Rochester.
T. C. WHITE, Rochester.
R. S. BISHOP, Medina.
H. S. HUTCHINS, Batavia.
L. B. WELLS, Utica.
H. C. JONES, West Chester.
H. M. DAYFOOT, Mount Morris.
N. N. CHILDS, Ogdensburg.
L. CLARY, Syracuse.
M. M. FRYE, Auburn.
F. L. VINCENT, Troy.
H. D. PAINE, New York City.
H. R. STILES, Middletown.
G. S. NORTON, New York City.

B. B. SCHENCK, Plainville.
W. D. LAXTON, Choctaw.
N. R. SEELEY, Elmira.
H. C. JONES, Mount Vernon.
D. F. BISHOP, Lockport.
W. B. RICE, Niagara Falls.
F. L. H. WILLIS, Glenova.
J. W. SHILDER, Syracuse.
E. R. CLAPIN, New York City.
R. R. GREEG, Buffalo.
J. N. ANDERSON, Rochester.
S. A. BANKS, New York City.
GEORGE B. PALMER, East Hamilton.
W. B. KENYON, Buffalo.
E. G. COOK, Buffalo.
J. A. CARMICHAEL, New York City.
EGBERT GURNSEY, New York City.
A. P. TROAP, Troy.
F. DE WITT BATES, Rochester.
E. D. JONES, Albany.
E. H. HURD, Rochester.

Ohio.

T. P. Wilson, Cincinnati.
WM. OWENS, Cincinnati.
S. R. BECKWITH, Cincinnati.
J. D. BUCK, Cincinnati.
B. EHRMANN, Cincinnati.
J. M. PARKS, Cincinnati.
T. C. BRADFORD, Cincinnati.
J. C. SANDERS, Cleveland.
D. H. BECKWITH, Cleveland.
J. PETTET, Cleveland.
H. F. BIGGAR, Cleveland.
R. B. RUSH, Salem.
E. V. VAN NORMAN, Springfield.
C. C. WHITE, Columbus.
S. S. LUNGREN, Toledo.
S. BAILEY, Toledo.
L. D. WALTER, Marietta.
C. W. HAMISFAR, St. Mary's.
J. W. HAINES, Waynesville.

Pennsylvania.

C. G. RAUE, Philadelphia.
O. B. GAUSE, Philadelphia.
H. N. MARTIN, Philadelphia.
R. J. MCCLATCHEY, Philadelphia.
B. W. JAMES, Philadelphia.
J. C. GUERNSEY, Philadelphia.
J. B. WOOD, West Chester.
J. C. BURGHER, Pittsburg.
RICHARD ALLEN, Philadelphia.
J. H. MCCLELLAND, Pittsburg.
W. F. EDMUNDSON, Pittsburg.
C. F. BINGAMAN, Pittsburg.
J. H. P. FROST, Danville.
L. H. WILLARD, Alleghany.
A. P. BOWIE, Uniontown.
J. S. PFOUTS, Wilkesbarre.
H. H. HOFMAN, Pittsburg.
F. E. BOERICKE, Philadelphia.
E. Z. SCHMUCKER, Reading.
J. R. READING, Somerton.
C. T. CANFIELD, Titusville.
J. E. JONES, West Chester.
J. A. DUNNING, Corry.
J. L. SCOTT, Coatesville.
COATES PRESTON, Chester.
M. A. B. WOODS, Erie.
G. M. SCHEURER, Clearfield.
J. L. CORBIN, Athens.
H. DETWILER, Easton.
B. F. DAKE, Pittsburg.
E. L COOK, Erie.

Rhode Island.

WILHELM VON GOTTSCHALK, Providence.
I. H. SAWIN, Providence.

Tennessee.

J. P. DAKE, Nashville.
W. A. EDMUNDS, Memphis.

Vermont.

C. B. CURRIER, Middlebury.

Wisconsin.

L. E OBER, La Crosse.

Canada.

H. C. ALLEN, Brantford.

The following homœopathic physicians, not members of the Institute, were present as visitors, viz.:

H. P. VANDUSEN, Newark, N. J.
E. H. ADAMS, Palmyra, N. Y.
J. C. MCPHERSON, Corfu, N. Y.
E. C. PARKS, Holley, N. Y.
J. F. MCKOWN, Albany, N. Y.
C. CASPARI, Baltimore, Md.
E. VERNON, Hamilton, Canada.
G. E. TAYLOR, Philadelphia, Pa.
A. J. FRANZ, Canoza, N. Y.
B. SONEIGN, Yorkshire, N. Y.
J. M. FOCKLER, Plymouth, O.
H. MOLESWORTH, New York City.
C. H. FOSTER, Bridgeport, Conn.
W. A. FLICK, Philadelphia, Pa.
C. F. MITCHEL, Paris, Ont., Canada.
—— PARKHURST, Chicago, Ill.
A. W. HORLUPEN, Rochester, N. Y.
MRS. DR. LIPPINCOTT, Salem, N. J.
H. E. COTTON, Buffalo, N. Y.
C. H. THOMPSON, Pittsford, N. Y.
DR. HOWARD, Montreal, Canada.

The States are represented as follows:

Alabama,	1	New Jersey,	4
Connecticut,	6	New Hampshire,	2
Illinois,	10	New York,	88
Iowa,	1	Ohio,	21
Indiana,	2	Pennsylvania,	85
Louisiana,	1	Rhode Island,	2
Maryland,	3	Tennessee,	2
Maine,	1	Vermont,	1
Massachusetts,	17	Wisconsin,	1
Michigan,	6	Canada,	4
Minnesota,	2		
Missouri,	1	Total,	206

ORGANIZATIONS REPRESENTED.

NATIONAL AND STATE SOCIETIES.

Connecticut Homœopathic Medical Society.

G. H. WILSON, M.D., West Meriden.
H. E. STONE, M.D., Fairhaven.
C. H. SKIFF, M.D., New Haven.
E. P. MOSMAN, M.D., Norwalk.
H. M. BISHOP, M.D., Norwich.

Illinois State Homœopathic Medical Society.

R. LUDLAM, M.D., Chicago.
A. E. SMALL, M.D., Chicago.
D. S. SMITH, M.D., Chicago.

S. P. Cole, M.D., Chicago.
G. W. Foote, M.D., Galesburg.
H. Pearce, M.D., Chicago.
E. M. McAffee, M.D., Mt. Carroll.
W. H. Burt, M.D., Chicago.
A. H. Patter, M.D., Chicago.
S. P. Hedges, M.D., Chicago.

Iowa State Homœopathic Society.

G. H. Patchen, M.D., Burlington.

Indiana Institute of Homœopathy.

W. Eggert, M.D., Indianapolis.
J. B. Hunt, M.D., Indianapolis.

Maine State Homœopathic Medical Society.

D. P. Flanders, M.D., Belfast.

Massachusetts State Homœopathic Medical Society.

David Thayer, M.D., Boston.
Conrad Wesselhœft, M.D., Boston.
J. H. Woodbury, M.D., Boston.
E. U. Jones, M.D., Taunton.
C. H. Farnsworth, M.D., East Cambridge.
D. B. Whittier, M.D., Fitchburg.
C. W. Scott, M.D., Lawrence.
D. Holt, M.D., Lowell.
G. W. Swazey, M.D., Springfield.

Michigan State Homœopathic Medical Society.

C. P. Burch, M.D., Lansing.
H. C. Stephenson, M.D., Lowell.
I. Malcolm, M.D., Flint.

Minnesota State Homœopathic Institute.

J. T. Alley, M.D., St. Paul.
C. G. Higbee, M.D., St. Paul.

New Hampshire State Medical Society.

J. F. Whittle, M.D., Nashua.
W. H. W. Hinds, M.D., Milford.

New Jersey State Homœopathic Medical Society.

W. McGeorge, M.D., Woodbury.
G. W. Richards, M.D., Orange.
H. F. Hunt, M.D , Camden.

New York State Homœopathic Medical Society.

B. F. GRANT, M.D., Bath.
E. S. COBURN, M.D., Troy.

Ohio State Homœopathic Medical Society.

J. M. PARKS, M.D., Cincinnati.
H. B. VAN NORMAN, M.D., Cleveland.
J. B. OWENS, M.D., Lebanon.
W. M. DETWILER, M.D., Findlay.
L. E. ADAMS, M.D., Springfield.
J. R. FLOWERS, M.D., Columbus.
H. H. BAXTER, M.D., Cleveland.
S. S. LUNGREN, M.D., Toledo.

Pennsylvania State Homœopathic Medical Society.

M. COTE, M.D., Pittsburg.
M. M. WALKER, M.D., Philadelphia.
S. R. RITTENHOUSE, M.D., Reading.
J. E. JAMES, M.D., Philadelphia.
J. C. MORGAN, M.D., Philadelphia.
ISAAC LEFEVER, M.D., Harrisburg.
M. J. KOENIG, M.D., Jersey Shore.
W. F. SPETH, M.D., Lebanon.
J. H. P. FROST, M.D., Danville.

Rhode Island State Homœopathic Medical Society.

WILHELM VON GOTTSCHALK, M.D., Providence.
WALTER M. JACKSON, M.D., Providence.
IRA BARROWS, M.D., Providence.
COURTLAND HOPPIN, M.D., Providence.

Wisconsin State Homœopathic Medical Society.

L. E. OBER, M.D., La Crosse.

Vermont.

C. B. CURRIER, M.D., Middlebury.
N. G. BRIGHAM, M.D., Montpelier.

LOCAL AND COUNTY SOCIETIES.

Illinois Valley Homœopathic Medical Society.

C. D. FAIRBANKS, M.D., Ottawa.

Terre Haute (Ind.) Homœopathic Medical Society.

M. H. WATERS, M.D., Terre Haute.

Essex County (Mass.) Homœopathic Medical Society.

W. H. LOUGEE, M.D., Lawrence.
N. R. MORSE, M.D., Salem.

Worcester County (Mass.) Homœopathic Medical Society.
J. K. WARREN, M.D., Palmer.

Boston Homœopathic Medical Society.
H. E. SPAULDING, M.D., Hingham.

Monroe County (N. Y.) Homœopathic Medical Society.
JOSEPH A. BIEGLER, M.D., Rochester.

Schuyler County (N. Y.) Homœopathic Medical Society.
WILLIAM GULICK, M.D., Watkins.

Madison County (N. Y.) Homœopathic Medical Society.
E. C. BASS, M.D., Cazenovia.

Alleghany County (Pa.) Homœopathic Medical Society.
H. HOFMAN, M.D., Pittsburg.

Chicago Materia Medica Society.
H. B. FELLOWS, M.D., Chicago.

Chicago Pædological Society.
L. H. HOLBROOK, M.D., Chicago.

Homœopathic Medical Society of Chester, Delaware, and Montgomery Counties, Pa.
J. B. WOOD, M.D., West Chester.

St. Lawrence County (N. Y.) Homœopathic Medical Society.
S. HOAG, M.D., Canton.

Niagara and Orleans Counties (N. Y.) Homœopathic Medical Society.
W. B. RICE, M.D., Niagara Falls.

Hudson County (N. J.) Homœopathic Medical Society.
J. J. YOULIN, M.D., Jersey City.

West Jersey Homœopathic Medical Society.
WALTER WARD, M.D., Mount Holly.
R. M. WILKINSON, M.D., Trenton (alternate).

Kings County (N. Y.) Homœopathic Medical Society.
P. P. WELLS, M.D., Brooklyn.

New York County Homœopathic Medical Society.
W. H. WHITE, M.D., New York.

Cumberland Valley (Pa.) Homœopathic Medical Society.
W. H. COOK, M.D., Carlisle.
B. BOWMAN, M.D., Chambersburg (alternate).

Philadelphia County (Pa.) Homœopathic Medical Society.
BUSHROD W. JAMES, M.D., Philadelphia.

Chicago Academy of Homœopathic Physicians and Surgeons.
S. P. HEDGES, M.D., Chicago.

Westchester County (N. Y.) Homœopathic Medical Society.
LEVI W. FLAGG, M.D.
HENRY C. JONES, M.D. (alternate).

Hahnemann Academy of Medicine (New York).
T. F. ALLEN, M.D., New York.

Steuben County (N. Y.) Homœopathic Medical Society.
W. S. PURDY, M.D., Corning.

Homœopathic Medical Society of Eastern Ohio.
R. B. RUSH, M.D , Salem.

Montgomery County (Ohio) Homœopathic Medical Society.
J. B. OWENS, M.D., Lebanon.

Dayton (Ohio) Homœopathic Medical Society.
W. WEBSTER, M.D., Dayton.

Berks and Schuylkill Counties (Pa.) Homœopathic Medical Society
E. Z. SCHMUCKER, M.D., Reading.

Philadelphia County (Pa.) Homœopathic Medical Society.
RICHARD C. ALLEN, M.D.

Ramsey County (Minn.) Homœopathic Medical Society.
C. G. HIGBEE, M.D., St. Paul.

Oneida County (N. Y.) Homœopathic Medical Society.
L. B. WELLS, M.D., Utica.

Cleveland (Ohio) Academy of Medicine and Surgery.
D. H. BECKWITH, M.D., Cleveland.

Chemung County (N. Y.) Homœopathic Medical Society.
N. R. SEELEY, M.D., Elmira.

Livingston County (N. Y.) Homœopathic Medical Society.
H. M. DAYFOOT, M.D., Mount Morris.

Homœopathic Medical Society of Northwestern Pennsylvania.
J. A. DUNNING, M.D., Corry.

Hahnemann Club of Philadelphia.
BUSHROD W. JAMES, M.D., Philadelphia.

Cincinnati Homœopathic Medical Society.
S. R. BECKWITH, M.D., Cincinnati.

Cincinnati Homœopathic Poli-clinic.
WILLIAM OWENS, M.D., Cincinnati.

Homœopathic Medical Society of Chester, Delaware, and Montgomery Counties, Pa.
J. B. WOOD, M.D., West Chester.

Hennepin County (Minn.) Homœopathic Medical Society.
W. H. LEONARD, M.D., Minneapolis.

Champlain Valley (Vt.) Homœopathic Medical Society.
C. B. CURRIER, M.D., Middlebury.

HOSPITALS AND ASYLUMS.

Massachusetts Homœopathic Hospital, Boston.
E. B. DE GERSDORFF, M.D., Boston.

Pittsburg (Pa.) Homœopathic Hospital and Dispensary.
J. C. BURGHER, M.D., Pittsburg.

Home for Little Wanderers, Boston, Mass.
J. H. WOODBURY, M.D., Boston.

House of the Angel Guardian, Boston.
H. P. SHATTUCK, M.D., Boston.

Consumptives' Home, Boston, Mass.
CHARLES CULLIS, M.D., Boston.

Home for Fallen and Indigent Women, Boston.
CAROLINE E. HASTINGS, M.D., Boston.

Chicago Foundlings' Home.
G. E. SHIPMAN, M.D., Chicago.

Half Orphan Asylum, Chicago.
S. P. HEDGES, M.D., Chicago.

Home of the Friendless, Chicago.
D. A. COLTON, M.D., Chicago.

New York State Homœopathic Asylum for the Insane.
HENRY R. STILES, M.D., Middletown.

Half Orphan Protestant Asylum, New Orleans, La.
R. ANGELL, M.D., New Orleans.

Minnesota State Deaf and Dumb Asylum, Faribault, Minn.
Z. B. NICHOLS, M.D., Faribault.

Cleveland Homœopathic Hospital, Cleveland, Ohio.
H. F. BIGGAR, M.D., Cleveland.

Brooklyn (N. Y.) Homœopathic Maternity.
CHARLES SUMNER, M.D., Brooklyn.

Brooklyn (N. Y.) Homœopathic Hospital.
E. J. WHITNEY, M.D., Brooklyn.

Cincinnati Sanitarium for the Treatment of Mental and Nervous Diseases.
S. R. BECKWITH, M.D., Cincinnati.

New York Ophthalmic Hospital, New York.
HENRY C. HOUGHTON, M.D., New York.

New York Children's Hospital, in connection with the Five Points House of Industry.
ST. CLAIR SMITH, M.D., New York.

New York Half Orphan Asylum, New York.
E. M. KELLOGG, M.D., New York.

Home for the Friendless, New York.
WILLIAM N. GURNSEY, M.D., New York.

Homœopathic Surgical Hospital, New York.
WILLIAM S. HELMUTH, M.D., New York.

Hahnemann Hospital, New York.
F. SEEGER, New York.

Buffalo (N. Y.) Homœopathic Hospital.
A. R. WRIGHT, M.D., Buffalo.

Hahnemann Homœopathic Hospital, Philadelphia.
O. B. GAUSE, M.D., Philadelphia.

Homœopathic Hospital of Pennsylvania at Philadelphia.
ROBERT J. MCCLATCHEY, M.D., Philadelphia.

DISPENSARIES AND INFIRMARIES.

Boston Dispensary, Boston, Mass.
L. D. PACKARD, M.D., Boston.

Providence Homœopathic Dispensary, Providence, R. I.
ISAAC SAWIN, M.D., Providence.

Denver (Col.) Homœopathic Dispensary.
M. MAYER MARIX, M.D., Denver.

Harlem (N. Y.) Homœopathic College Dispensary.
T. F. SMITH, M.D , New York.

New York Homœopathic Dispensary.
EMMA SCOTT, M.D., New York.

Dayton (Ohio) Homœopathic Dispensary.
A. C. RECKER, M.D., Dayton.

Hahnemann Homœopathic Dispensary, Philadelphia, Pa.
J. C. GUERNSEY, M.D., Philadelphia.

Foundling's Home Dispensary.
J. P. MILLS, M.D., Chicago.

New York Homœopathic College Dispensary.
GEORGE S. NORTON, M.D., New York.

Ingleside Home, Buffalo, N. Y.
L. M. KENYON, M.D , Buffalo.

Western Homœopathic Dispensary, New York City.
EGBERT GURNSEY, M.D., New York.

MEDICAL COLLEGES.

Boston (Mass.) University School of Medicine.
I. T. TALBOT, M.D., Boston.

Detroit Homœopathic Medical College.
J. H. P. FROST, M.D.

Homœopathic Medical College of Missouri.
E. C. FRANKLIN, M.D., St. Louis.

New York Homœopathic College.
J. W. DOWLING, M.D., New York.

New York Homœopathic College for Women.
S. LILIENTHAL, New York.

Cleveland (Ohio) Homœopathic Hospital College.
J. C. SANDERS, M.D., Cleveland.

Pulte Medical College, Ohio.
J. D. BUCK, M.D., Cincinnati.

Hahnemann Medical College, Philadelphia.
H. N. MARTIN, M.D., Philadelphia.

Hahnemann Medical College, Chicago.
A. E. SMALL, M.D., Chicago.

Michigan Homœopathic College, Lansing, Mich.
E. D. BURR, M.D., Lansing.

HOMŒOPATHIC JOURNALS.

Medical Investigator, Chicago.
T. C. DUNCAN, M.D., Chicago.

U. S. Medical and Surgical Journal, Chicago.
R. LUDLAM, M.D., Chicago

New England Medical Gazette.
C. F. NICHOLS, M.D., Boston.

North American Journal of Homœopathy, New York.
S. LILIENTHAL, M D., New York.

Ohio Medical and Surgical Reporter, Cleveland.
H. F. BIGGAR, M.D., Cleveland.

Medical Advance, Cincinnati.
T. P. WILSON, M.D., Cincinnati.

Hahnemannian Monthly, Philadelphia, Pa.
R. J. McCLATCHEY, M.D., Philadelphia.

American Journal of Homœopathic Materia Medica.
A. R. THOMAS, M.D., Philadelphia.

American Observer.
E. A. LODGE, M.D., Detroit.

Medical Union.
EGBERT GURNSEY, M.D., New York.

Detroit Homœopathic Journal.
J. H. P. FROST, M.D., Danville, Pa.

RECAPITULATION.

Members present,	182
Visitors present,	24
Total,	206
Delegates present:	
From State Societies,	64
" Local Societies,	43
" Colleges,	10
" Hospitals and Asylums,	25
" Dispensaries,	11
" Medical Journals,	11
States represented in the Institute,	21

NATHAN R. MORSE,
R. B. RUSH,
T. L. BROWN,
Committee on Credentials.

XXXIX.

REPORT

OF THE

COMMITTEE ON FOREIGN CORRESPONDENCE.

By Carroll Dunham, M.D., Irvington, N. Y.

Mr. President: I propose to present to the Institute extracts from two letters recently received from a colleague in Italy, preceding them with a few remarks on the history and present condition of homœopathy in Italy in general, and in Naples in particular.

Homœopathy was introduced into Naples nearly ten years before it was introduced into the United States, and it was introduced under very favorable auspices. The first homœopathic physician was physician to the king; he had for some time the run of the military hospitals, and conducted some exceedingly interesting experiments in homœopathic therapeutics. His hospital reports were published. By and by the king died, and his nephew and successor did not employ the homœopathist, and the latter consequently lost control of the hospitals. But by this time homœopathy had made so favorable an impression in Naples, that the directors of the orphan asylum of that city and of another institution, appointed a homœopathic physician to have medical charge of each. The reports of these charities, published by the authorities, stated that the homœopathic treatment of the sick was eminently successful. Scarcely two years had passed away, however, before these two physicians were notified that their services were no longer required; the reason assigned

for their dismissal being, that they did not properly attend to their duties. But the frank, unreserved statement of at least half a dozen homœopathic physicians residing in Naples, who were cognizant of all the facts, was to the effect that these two doctors had so much to do in their private practice that they could not and did not give proper attention to the institutions under their charge, and that consequently the directors, though very greatly regretting the necessity of such a course, had nothing for it but to dismiss them. Now, strange though it may seem, when I came to inquire why each of these two doctors did not associate with himself one or more colleagues to help him in the hospital work, and thus keep it in homœopathic hands, the answer I received was that every early homœopathic physician of Naples thought there was not another physician in the city a good enough homœopathist to be associated with him. This was undoubtedly the private opinion of at least half a dozen with whom I spoke on the subject.

Five or six years ago, as you may easily infer on learning that such a spirit prevailed amongst Italian physicians, there was no homœopathic society in any part of Italy. The position which each Italian homœopathic practitioner held towards his fellows was one of unfriendliness, of hostile indifference, or, at least, of non-intercourse. Five or six years ago the Committee on Foreign Correspondence of this Institute prepared a circular and distributed it largely throughout the world, urging upon homœopathic physicians everywhere the importance of forming local, state, county, provincial, and national associations. It may have been a mere coincidence, and it may have been a consequence, that about that time a homœopathic medical society was formed in Turin. Another has now been formed in Rome, and another in Naples. These societies appointed a committee to frame a constitution for a National Homœopathic Institute. That constitution has been prepared and published, and it is almost identical with the constitution of the American Institute of Homœopathy. I am in expectation of receiving the report of the First Session of the Italian Institute of Homœopathy.

I herewith present extracts from the letters referred to:

March 1st, 1874.

To CARROLL DUNHAM, M.D.

* * * * * * * * * * * *

My journal, *Il Dinamico*, will soon appear again as the organ of the Neapolitan Homœopathic Medical Society, which, after so many difficulties encountered and overcome, we have succeeded in establishing, and which held its first session February 15th, 1874, at which it was resolved to form a society, and a committee was appointed to prepare an Act of Association.

Since you left there have been opened in Naples, besides the four previously existing, two additional homœopathic pharmacies, one in the Largo Girofano, and the other in the Riolo Pizzofalcone, No. 66.

May 14th, 1874.

* * * * * * * * * * * *

As regards the introduction of the teaching of homœopathy into the University of Naples, this question will soon come before the Government. Meanwhile I have obtained permission and have determined to give some public lectures upon Homœopathic Materia Medica and Therapeutics in this city, and the first lecture will be given on the last Sunday of May.

I read, not long ago, in an American journal, that I had been elected a Corresponding Member of the American Institute of Homœopathy. I should find it very difficult to give adequate expression to my recognition of the honor conferred on me by my American colleagues, and think I can best show my appreciation by transmitting to the Institute sundry communications upon subjects of practical interest, which I will do. First of these will be a paper upon *Diphtheria*, which has made sad ravages in Naples and its suburbs. In treating this disease, I have for a long time used, with the happiest results, l'Acido femico (carbolic acid). With it I have treated about eighty cases, using the first centesimal dilution, two or three drops in a glass of water, the whole to be taken within twenty-four hours.

Within a few hours, or, at most, within eight or ten hours, I have noticed abatement of febrile symptoms, gentle perspiration, decrease in dimensions of the deposits. I should remark that I have sometimes observed a better and more speedy effect from the 3d and the 6th dilutions. As an indication that the remedy is acting too energetically, I have noticed a headache occurring regularly about 11 P.M.

These few words for the present. With cordial greetings to my colleagues, I am, etc.,

(Signed) TOMASSO CIGLIANO.

XL.

CONSTITUTION AND BY-LAWS

(ADOPTED JUNE 10TH, 1874.)

CONSTITUTION.

ARTICLE I.—NAME AND OBJECT.

This Association shall be styled the AMERICAN INSTITUTE OF HOMŒOPATHY, and its object the improvement of homœopathic therapeutics and all other departments of medical science.

ARTICLE II.—MEMBERS.

The Institute shall be composed of those physicians who are already members, and of such others as may be hereafter chosen in conformity with the By-laws.

ARTICLE III.—OFFICERS.

The officers of the Institute shall be a President, Vice-President, a General Secretary, a Provisional Secretary, and a Treasurer, with such other officers as shall be designated by the By-laws, to be chosen at such time, in such manner, for such a period, and with such duties, as these By-laws shall ordain.

ARTICLE IV.—SEAL.

The Institute shall have and use one common seal, with a suitable device and inscription.

ARTICLE V.—AMENDMENTS.

This Constitution may be altered or amended by a vote of two-thirds of all the members present at the regular annual meeting, provided that notice of such alteration or amendment shall have been given in writing at a previous annual meeting of the Institute.

BY-LAWS.

ARTICLE I.—MEETINGS.

The Institute shall hold at least one session in each year, at such time and place as may be determined upon from time to time.

ARTICLE II.—OFFICERS.

SECTION 1. The officers shall be elected by ballot at each annual session of the Institute, and shall enter upon their respective duties the first day of January following.

SECTION 2. The officers of the Institute, viz., the President, Vice-President, General Secretary, Provisional Secretary, and Treasurer, shall constitute an Executive Committee, which shall arrange the business of the meetings, attend to matters of business not otherwise specially provided for, and perform such other duties as may by vote of the Institute devolve upon it.

ARTICLE III.—DUTIES OF OFFICERS.

SECTION 1. The President shall preside at the meetings of the Institute and perform the duties usually pertaining to his office, together with such others as may by vote of the Institute devolve upon him. He shall sign all certificates of membership. He shall deliver an address at the opening of each session on the progress of Homœopathy during the year past, and make such suggestions as he may deem necessary for the Institute to take action on during the session.

SECTION 2. The Vice-President shall perform the duties of the President in his absence or disability.

SECTION 3. The General Secretary shall keep a record of the proceedings of the meetings, conduct the correspondence of the Institute, issue notices of meetings, notify candidates of their election, sign certificates of membership, and perform such other duties as the Institute may direct.

SECTION 4. The Provisional Secretary shall assist the General Secretary, and in his absence perform his duties.

SECTION 5. The Treasurer shall receive all money belonging to the Institute, and make all disbursements under the recommendation of the Executive Committee. He shall furnish at each annual meeting a written report of the condition of the finances.

ARTICLE IV.—CENSORS.

At each annual session the Institute shall elect, by ballot, a

board of five censors (three of whom shall constitute a quorum), who shall receive and examine the credentials of candidates for membership, and report to the Institute for election such as may be found properly qualified. The censors shall enter upon their duties on the first day of January following their election.

ARTICLE V.—MEMBERSHIP.

SECTION 1. Candidates for membership shall present to the Board of Censors a certificate of three members of the Institute that the applicant has pursued a regular course of medical studies, according to the requirements of the existing institutions of this country, and sustains a good moral character and professional standing. Such certificate shall state when and where the applicant obtained a diploma. If found qualified the candidate may be elected a member. No person shall be considered a member, however, before paying an admission fee of two dollars, and the annual dues, which shall entitle him to a certificate of membership.

SECTION 2. Any physician, properly accredited as a delegate, shall be admitted during the session of the Institute to all the privileges of members, except voting and eligibility to office, on the following basis:

First. From every association composed of more than fifty members from different States, two delegates, with an additional delegate for every twenty members.

Second. From every State Society, two delegates, with an additional delegate for every twenty members.

Third. From every county or local society, one delegate.

Fourth. From every college, hospital, asylum for the insane or dispensary, actually established, one delegate.

Fifth. From every medical journal published, one delegate.

Such delegates shall be elected for the term of one year.

SECTION 3. Any foreign physician may be elected a Corresponding Member of the Institute at any annual meeting, and shall have all the privileges of members except voting and eligibility to office.

SECTION 4. The Institute may, at any annual meeting, elect as Honorary Members, not to exceed five in one year, any foreign physicians who may be judged worthy, from their superior attainments in medicine; provided that the names of persons proposed for Honorary Membership shall have been presented at a previous annual meeting. Such Honorary Members shall have all the privileges of members except voting and eligibility to office.

SECTION 5. All members of the Institute who have maintained

twenty-five consecutive years of membership shall be considered *Senior Members*, and be exempt from the payment of annual dues; and the names of such members shall be printed first in the list of members, in capital letters.

SECTION 6. Of State Societies represented in the Institute, the Presidents shall be *ex-officio* Vice-Presidents, and the Recording Secretaries shall be *ex-officio* Corresponding Secretaries of the Institute, and these officers shall communicate through the various bureaus any facts or information concerning the condition of these societies, and the progress of medicine and homœopathy in their several States.

ARTICLE VI.—DUES.

SECTION 1. Members shall pay annually the sum of five dollars toward defraying the expenses of the Institute. The proceedings of the Institute will be sent to those members only who have paid their dues.

ARTICLE VII.—BUREAUS AND COMMITTEES.

SECTION 1. There shall be a Bureau of Materia Medica, Pharmacy, and Provings, consisting of nine members, which shall collate facts relating to the materia medica and pharmacy, and institute, collect, and arrange provings of drugs.

SECTION 2. There shall be a Bureau of Clinical Medicine, consisting of nine members, which shall collect facts relating to clinical medicine generally, and especially to any endemic or epidemic diseases which may exist in the country.

SECTION 3. There shall be a Bureau of Obstetrics, consisting of nine members, which shall collect and report to the Institute facts and observations on subjects pertaining thereto.

SECTION 4. There shall be a Bureau of Gynæcology, consisting of nine members, which shall collect and report to the Institute facts and observations relating to the diseases of women.

SECTION 5. There shall be a Bureau of Pædology, consisting of nine members, which shall collect and report to the Institute facts and observations relating to the diseases of children.

SECTION 6. There shall be a Bureau of General Sanitary Science and Climatology, consisting of nine members, which shall report to the Institute facts and observations relating to these departments.

SECTION 7. There shall be a Bureau of Surgery, consisting of nine members, which shall report upon all improvements in surgery.

SECTION 8. There shall be a Bureau of Organization, Registration, and Statistics, consisting of at least seven members,

which shall keep a register of all homœopathic physicians, or those who claim to be such, in the United States, distinguishing those who are members of the Institute, and also members of the State Societies; prepare a list of all State and local societies, colleges, hospitals, asylums, dispensaries, and journals, with their organization; and collect statistics regarding homœopathy, its status and progress.

SECTION 9. There shall be a Bureau of Anatomy, Physiology, and Hygiene, consisting of nine members, which shall report to the Institute the advances made in these departments of medical science.

SECTION 10. There shall be a Bureau of Psychological Medicine, consisting of seven members, which shall report to the Institute the results of the homœopathic treatment of psychological diseases.

SECTION 11. There shall be a Bureau of Ophthalmology, Otology, and Laryngology, to consist of seven members, which shall report to the Institute improvements in these departments.

SECTION 12. There shall be a Bureau of Microscopy, consisting of five members, who shall institute examinations, and report annually all discoveries and improvements in that department of science.

SECTION 13. There shall be a Committee on Legislation, consisting of at least five members, which shall look after all matters of legislation affecting the interests of the Institute and its members.

SECTION 14. There shall be a Committee on Literature, consisting of five members, which shall report annually on homœopathic literature.

SECTION 15. There shall be a Committee on Foreign Correspondence, consisting of at least five members, which shall correspond with foreign homœopathic physicians on matters relating to homœopathy, and report annually to the Institute. All members of the Institute, travelling abroad, shall be considered members of the said committee, and the names of all such, who may furnish communications from abroad, at any annual meeting of the Institute, shall be published with those constituting said committee, in the annual volume of the proceedings of this body.

SECTION 16. The bureaus and committees shall be appointed by the President, with the advice of the other members of the Executive Committee, immediately after rendering their reports. No member of a bureau shall be reappointed to that bureau who has failed to present a paper to the Institute for two consecutive years. If any member of a bureau shall resign, or decline to serve, the chairman of the bureau may fill the vacancy, and shall notify the General Secretary of the fact.

SECTION 17. Each chairman of a bureau shall convene the members of his bureau as soon as may be after their appointment, at which time there shall be selected special subjects to be reported on by them, or to be discussed by the Institute at its next annual session.

SECTION 18. The chairmen of similar bureaus in State societies represented in the Institute, shall be *ex officio* corresponding members of the bureaus.

SECTION 19. All papers presented to the Institute must be through an appropriate bureau or committee, or a notice of such presentation be given to the Executive Committee at least one month prior to the date of meeting.

SECTION 20. No report or paper will be received by the Institute in an incomplete or unfinished condition; and no paper shall be published in the *Transactions* which has been previously published. All reports and papers, which are to be published in the *Transactions*, shall be furnished to the General Secretary within thirty days after the close of the session.

SECTION 21. No bureau papers shall be published in the *Transactions* but those bearing on the special subjects selected; and the discussions on those subjects shall be published in their appropriate sections.

SECTION 22. The Executive Committee shall constitute the Committee of Publication.

ARTICLE VIII.—AMENDMENTS.

These By-laws may be altered or amended by a vote of two-thirds of the members present at any annual meeting.

ORDER OF BUSINESS.

Calling meeting to order.
Address by the President.
Appointment of committee to consider and report on suggestions of the President.
Appointment of Committee on Credentials.
Report of the Secretary.
Report of the Treasurer.
Appointment of committee to audit Treasurer's account.
Reports of committees.
Reports of bureaus.
Unfinished business from last meeting.
Miscellaneous business.
Election of officers.
Adjournment.

XLI.

RESOLUTIONS.

ADOPTED JUNE 13, 1850.

Resolved, That, in the opinion of this Institute, all methods of arriving at the curative properties of a drug, except by means of its pathogenetic effects, are uncertain.

ADOPTED JUNE 12, 1851.

Resolved, That members of the Institute who may change their place of residence are hereby requested to give notice of such change to the General Secretary.

ADOPTED JUNE 8, 1854.

Resolved, That all committees appointed to report on scientific subjects, failing to report within one year after their appointment, shall be discontinued, except by a vote of two-thirds of the members present.

Resolved, That we regard the homœopathic law as coextensive with disease, and that a resort to any other medicinal means than those pointed out by the law *similia similibus,* is the result, in part, of the incompleteness of our Materia Medica, but mainly the result of a want of sufficient knowledge on the part of the physician, of those remedies already possessed by our school; and not of an insufficiency of the homœopathic law.

Resolved, That the pharmaceutists of the homœopathic school be recommended to use, in the preparation of drugs by trituration, the proportions of ten grains of the drug to ninety grains of sugar of milk; and, for the sake of uniformity, to retain the numerical designation adopted by Hahnemann, and continued by the majority of homœopathic physicians.

ADOPTED JUNE 7, 1855.

Resolved, That the Institute cannot view the advertising of remedies as nostrums, or the combining of several medicines in one prescription, in any other light than as irregular practice, and subversive of the best interests of homœopathy; and that we will not tolerate in our membership one guilty of such practice.

ADOPTED JUNE 5, 1856.

Resolved, That, in accordance with the usage and dignity of scientific bodies, which very properly discountenance all extraordinary efforts on the part of members of such bodies to enhance individual interest, we, as an associated scientific body, will discountenance all like extraordinary efforts on the part of members of this Institute; and, whenever such cases come to our knowledge well authenticated, we will sever such members from our connection, as no longer worthy of our sympathy and fellowship.

ADOPTED JUNE 4, 1857.

Resolved, That it is the duty of the American Institute of Homœopathy to extend a fostering care to the homœopathic medical colleges of the United States, and exert its influence in directing students of medicine, who are seeking admission to the honors of the profession, to their halls for instruction.

Resolved, That the American Institute of Homœopathy does not necessarily indorse the doctrines contained in the reports of committees by accepting and publishing such reports with the proceedings.

ADOPTED JUNE 2, 1859.

Resolved, That in all publications of the Institute, whenever attenuations, dilutions, or potencies are mentioned, the centesimal scale is implied, unless a different scale is expressed.

Resolved, That, in the case of such papers ordered for publication as are objectionable on account of their length, the Publishing Committee may, with the consent of the authors, abbreviate the same, or suspend the publication thereof until otherwise instructed.

ADOPTED JUNE 7, 1866.

Resolved, That members who are three years in arrears, and who do not pay within one year after being so notified by the

Treasurer, shall be considered as having forfeited membership, and their names shall be stricken from the list.

Resolved, That, while we approve the establishment of life insurance companies which make a distinction in favor of the patrons of homœopathy, and while we desire to encourage such organizations, nevertheless with a view to impartiality, we hereby forbid the use of the name of the American Institute of Homœopathy in any manner calculated to advertise or promote the interests of one such company in preference to another.

ADOPTED JUNE 7, 1867.

Resolved, That, in the organization of life insurance companies which discriminate in favor of practical homœopathists, we recognize an important instrumentality, which, by showing the superiority of homœopathic treatment, will contribute to the more rapid adoption of the principles of medical science promulgated by the illustrious Hahnemann; and that, whenever practicable, the members of this Institute will give to such organization a united and cordial support.

ADOPTED JUNE 9, 1869.

Resolved, That properly qualified physicians, men or women, are eligible to membership of the American Institute of Homœopathy.

Resolved, That the Secretary be instructed to publish the forthcoming volumes of the Transactions so as to correspond with the general plan followed during the last two years.

Resolved, That the Bureau of Clinical Medicine be requested to give attention to the collection of clinical verifications of the symptoms contained in our Materia Medica, and to include such verifications in their reports, with whatever details they deem proper, giving credit to the authors.

Resolved, That the Institute invite State societies to co-operate in this work of clinical verification of the Materia Medica.

ADOPTED JUNE 8, 1870.

Resolved, That the Censors be required to state in what medical college and year the applicant for membership graduated, and that this statement be published with the names of the members after their admission.

Resolved, That the reading of reports of committees be limited to fifteen minutes, and if said reports are too lengthy to be read

within that time, the committee shall present a brief statement of the contents of the report, or read by title, as they elect, before it is referred to the appropriate committee.

Resolved, That the Institute order the preparation of a homœopathic dispensatory, to be submitted to the Institute before publishing, and direct the President to consider the suggestion of the Committee on a Dispensatory, concerning the plan and selection of the committee.

Resolved, That each member of the American Institute will best subserve the interests of homœopathic medicine by using great care to avoid accepting any student of medicine into his office who does not or cannot give evidence of possessing the preliminary education recommended in the report of the Committee on Education.

Resolved, That the resolution relating to qualification apply to all students whose term of pupilage shall commence subsequent to the year 1870, and that every effort be made to acquaint the profession at large with the action of the Institute.

Resolved, That candidates for membership in this Institute, who shall have graduated later than 1873, shall be required to present evidence of having attained the standard of qualification adopted by this Institute.

ADOPTED JUNE 6, 1871.

Resolved, That the President shall make an address at the opening of each session of the Institute, which address shall contain a general review of the progress of medicine and homœopathy during the past year, and such suggestions as he may deem necessary for the Institute to take action on during the session.

ADOPTED JUNE 9, 1874.

Resolved, That hereafter all provings by a single prover, presented through the Bureau of Materia Medica, Pharmacy, and Provings, be referred back to the bureau, to be retained by them until a sufficient number of provings are obtained to warrant the bureau in collating the same and presenting them to the Institute for publication; and such collation and presentation shall be a part of the duty of that bureau.

ADOPTED JUNE 10, 1874.

Resolved, That the Committee on Climatology of the American Institute of Homœopathy be, and they are hereby instructed, to

secure reports from the chief points of observation of the Signal Service of the United States Army, establishing the prevalence of various diseases at those points from time to time.

ADOPTED JUNE 11, 1874.

Resolved, That the American Institute of Homœopathy cordially and earnestly recommends all homœopathic colleges in this country to adopt a uniform system of education and requirement; and to this end would further recommend to each homœopathic college to appoint one or more members of its faculty to constitute an Intercollegiate Committee, whose duty it shall be to recommend and adopt such rules of comity and other measures as will further the above object.

ADOPTED JUNE 12, 1874.

Resolved, That the records of all the discussions of the several bureaus be printed each in its proper department in the volume of *Transactions*.

Resolved, That hereafter any member of the Institute who shall publish, or cause to be published, any report or paper read before the Institute, accepted and referred to the Committee of Publication, elsewhere than in the regular volume of *Transactions*, shall be deemed guilty of an offence, which shall subject the member offending to the censure of the Institute.

Resolved, That the bureaus of the Institute that pertain to practical medicine and surgery be hereafter arranged in rotation, so that each one may come first in its turn in successive years.

XLII.

MEMBERS.

The ? denotes that the residence is doubtful; the figures show the date of membership.

Members are requested to inform the General Secretary of any change in the address of any of the members.

The following resolution, passed June, 1866, went into effect June, 1867:

Resolved, That members who are three years in arrears, and who do not pay within one year after being so notified by the Treasurer, shall be considered as having forfeited membership, and their names shall be stricken from the list.

SENIOR MEMBERS.

1846. ANNIN, J. D., M.D., Newark, N. J.
1844. BALL, ALONZO S., M.D., 43 W. 11th St., New York.
1844. BARLOW, SAMUEL B., M.D., 55 E. 21st St., New York.
1848. BARROWS, GEORGE, M.D., Taunton, Mass.
1846. BARROWS, IRA, M.D., Providence, R. I.
1847. BAXTER, WILLIAM, M.D., Wappinger's Falls, N. Y.
1846. BAYARD, EDWARD, M.D., 8 W. 40th St., New York.
1846. BELCHER, GEORGE E., M.D., 43 E. 21st St., New York.
1846. BENNETT, HILEM, M.D., Rochester, N. Y.
1846. BERENS, BERNARD, M.D., 1507 Arch St., Philadelphia.
1846. BERENS, JOSEPH, M.D., S. W. cor. Broad and Green Sts., Philadelphia.
1845. BOARDMAN, J. C., M.D., Trenton, N. J.
1844. BOWERS, BENJAMIN F., M.D., 50 W. 29th St., New York.
1846. BRADFORD, RICHMOND, M.D., Auburn, Me.
1848. BURKE, A. C., M.D., 142 Union St., Brooklyn, N. Y.
1844. CATOR, H. HULL, M.D., Roxbury, N. Y.
1847. CHASE, HIRAM L., M.D., Cambridge, Mass.
1846. CLARK, ELIPHALET, M.D., Portland, Me.
1844. CLARK, LUTHER, M.D., Waltham, Mass.
1846. CLARKE, PELEG, M.D., 21 Sutton St., Providence, R. I.
1845. CLARY, LYMAN, M.D., 54 Warren St., Syracuse, N. Y.

1848. Cook, Abijah P., M.D., Hudson, N. Y.
1848. Cummings, J. M., M.D., Portland, Me.
1844. Detwiler, H., M.D., Easton, Pa.
1847. Dodge Moses, M.D., Portland, Me.
1848. Donovan, Thomas W., M.D., Tompkinsville, Staten Island, N. Y.
1847. Douglas, J. S., M.D., Milwaukee, Wis.
1846. Ehrman, Benjamin, M.D., 46 W. 7th St., Cincinnati, O.
1846. Ehrman, F., M.D., 84 W. 7th St., Cincinnati, O.
1844. Fuller, Milton, M.D., 35 Essex St., Boston, Mass.
1844. Gallupe, William, M.D., Bangor, Me.
1849. Gardiner, Daniel R., M.D., Pottsville, Pa.
1846. Gardiner, Richard, M.D., 146 N. 20th St., Philadelphia.
1844. Gray, John F., M.D., Fifth Avenue Hotel, New York.
1848. Guernsey, Egbert, M.D., 18 W. 23d St., New York.
1846. Guernsey, Henry N., M.D., 1423 Chestnut St., Philad'a.
1847. Guy, Samuel S., M.D., 94 Greene Av., Brooklyn, N. Y.
1846. Hallock, Lewis, M.D., 34 E. 39th St., New York.
1846. Helmuth, Wm. S., M.D., 1904 Spruce St., Philadelphia.
1846. Hempel, Charles J., M.D., Grand Rapids, Mich.
1844. Hering, Constantine, M.D., 112 N. 12th St., Philad'a.
1846. Holt, Daniel, M.D., Lowell, Mass.
1844. Jeanes, Jacob, M.D., 521 Vine St., Philadelphia.
1846. Jones, E. Darwin, M.D., Albany, N. Y.
1848. Keep, Lester, M.D., corner Gates and Vanderbilt Avs., Brooklyn, N. Y.
1844. Kimball, David S., M.D., Sackett's Harbor, N. Y.
1848. Koch, A. W., M.D., 118 N. 12th St., Philadelphia.
1845. Lippe, Adolph, M.D., 1204 Walnut St., Philada., Pa.
1844. McManus, F. R., M.D., 71 Franklin St., Baltimore, Md.
1844. Mairs, James, M.D., 45 W. 24th St., New York.
1844. Manchester, Charles F., M.D., 49 Main St., Pawtucket, R. I.
1848. Marcy, Erastus E., M.D., 1 W. 34th St., New York.
1846. *Morrill, Alpheus, M.D., Concord, N. H.
1848. Munger, Erastus A., M.D., Waterville, N. Y.
1844. Neidhard, Charles, M.D., 1511 Arch St., Philada., Pa.
1848. Norton, Lucian H., M.D., Bridgeport, Conn.
1844. Paine, Henry D., M.D., 26 West 30th St., New York.
1848. Palmer, Miles W., M.D., 235 E. 18th St., New York.
1844. Payne, William E., M.D., Bath, Me.
1847. Poole, Augustus, M.D., 232 W. 1st St., Oswego, N. Y.
1844. Pulte, Joseph H., M.D., 293 Walnut St., Cincinnati, O.

* Deceased.

1848. RAYMOND, JONAS C., M.D., 248 Genesee St., Utica, N. Y.
1848. READING, J. R., M.D., Somerton, Pa.
1846. RHEES, MORGAN J., M.D., Newtonville, Mass.
1847. RICHARDSON, EDW. T., M.D., 141 Montague St., Brooklyn, N. Y.
1849. RODMAN, WILLIAM W., M.D., New Haven, Conn.
1844. ROBINSON, HORATIO, M.D., Auburn, N. Y.
1848. RUSSEL, GEORGE, M.D., 14 Lynde St., Boston, Mass.
1847. SAWYER, B. E., M.D., Haverhill, Mass.
1844. SCHMIDT, J., M.D., 92 Eutaw St., Baltimore, Md.
1847. SHACKFORD, RUFUS, M.D., Portland, Me.
1846. SHEPARD, A., M.D., Glendale, O.
1844. SKIFF, CHARLES H., M.D., New Haven, Conn.
1846. SMALL, ALVIN E., M.D., 583 Wabash Av., Chicago, Ill.
1848. SMITH, D. S., M.D., 402 Michigan Av., Chicago, Ill.
1846. STEVENS, C. A., M.D., Scranton, Pa.
1844. SWAZEY, GEORGE W., M.D., Springfield, Mass.
1848. TAFT, CHARLES A., M.D., Hartford, Conn.
1847. THAYER, DAVID, M.D., 94 Boylston St., Boston, Mass.
1844. WARD, ISAAC M., M.D., Newark, N. J.
1844. WARD, WALTER, M.D., Mount Holly, N. J.
1848. WARNER, LEWIS T., M.D., 39 E. 19th St., New York.
1844. WELD, C. M., M.D., Norfolk House, Boston Highlands, Mass.
1848. WELLS, LUCIEN B., M.D., 225 Genesee St., Utica, N. Y.
1844. WELLS, P. P., M.D., 84 Clinton St., Brooklyn, N. Y.
1847. WHITTLE, JOSHUA F., M.D., Nashua, N. H.

MEMBERS.

1870. Abell, D. T., M.D., Sedalia, Mo.
1872. Abercrombie, Wm. H., M.D., Jersey City, N. J.
1871. Adams, Myron H., M.D., Palmyra, N. Y.
1860. Ahlborn, Henry, M.D., 76 Charles St., Boston, Mass.
1867. Albertson, J. A., M.D., 109 O'Farrell St., San Francisco, Cal.
1871. Allen, Richard C., M.D., 4708 Paul St., Frankford, Phila.
1871. Allen, Samuel E., M.D., Trenton, N. J.
1866. Allen, Timothy F., M.D., 3 East 33d St. New York.
1872. Allen, Henry C., M.D., Brantford, Ontario.
1873. Allen, George D., M.D., Portland, Mich.
1860. Alley, James T., M.D., St. Paul, Minn.
1868. Alvord, Samuel, M.D., Chicopee Falls, Mass.
1874. Anderson, Jeremiah, M.D., Rochester, N. Y.
1871. Andrews, Wm. J., M.D., Newark, N. J.
1853. Angell, Henry C., M.D., 16 Beacon St., Boston, Mass.

1869. Arcularius, Philip E., M.D., 41 E. 21st St., New York.
1871. Armor, Smith, M.D., Columbia, Pa.
1873. Armstrong, W. P., M.D., Paris, Ill.
1869. Arthur, A. A., M.D., Vergennes, Vt.
1874. Arthur, Charles, M.D., Scranton, Pa.
1858. Ashton, A. H., M.D., 730 S. 10th St., Philadelphia.
1871. Aten, Henry F., M.D., Brooklyn, N. Y.
1868. Bacmeister, Theodore, M.D., Toulon, Ill.
1871. Bacon, Charles A., M.D., New York City.
1867. Baer, O. P., M.D., Richmond, Ind.
1874. Baethig, Henry, M.D., Buffalo, N. Y.
1870. Bagley, H. B., M.D., Marshall, Mich.
1867. Bailey, George W., M.D., Elizabeth, N. J.
1873. Bailey, Benjamin F., Jr., M.D., Lansing, Mich.
1874. Bailey, Silas, M.D., Toledo, O.
1871. Baker, Daniel P., M.D., Little Valley, Cattaraugus Co., N. Y.
1870. Baker, R. F., M.D., Davenport, Iowa.
1872. Baker, Mary G., M.D., Worcester, Mass.
1871. Baldwin, Aaron, M.D., Georgetown, D. C.
1857. Baldwin, Jared G., M.D., 8 E. 41st St., New York.
1870. Bancroft, A. A., M.D., Lansing, Mich.
1868. Bancroft, Walton, M.D., La Salle, Ill.
1866. Baner, William J., M.D., 13 E. 33d St., New York.
1870. Barden, O. P., M.D., Tioga, Pa.
1867. Barker, William C., M.D., Waukegan, Ill.
1853. Barnes, George W., M.D., San Diego, Cal.
1868. Barrows, George S., M.D., San Jose, Cal.
1857. Bartlett, A. R., M.D., Aurora, Ill.
1867. Bartlett, Edward G., M.D., 43 E. 11th St., New York.
1873. Bartlett, Henry H., M.D., Geneva, O.
1874. Bass, Edgar C., M.D., Cazenovia, N. Y.
1868. Baxter, H. H., M.D., Cleveland, O.
1867. Baylies, B. L. B., M.D., Astoria, N. Y.
1870. Beaumont, John H., M.D., Freeport, Ill.
1869. Becker, Benjamin, M.D., Pottsville, Pa.
1865. Beckwith, D. H., M.D., Cleveland, O.
1871. Beckwith, E. C., M.D., Columbus, O.
1857. Beckwith, Seth R., M.D., 161 W. 7th St., Cincinnati, O.
1869. Beebe, A. G., M.D., 64 Park Av., Chicago, Ill.
1868. Bell, James B., M.D., Augusta, Me.
1867. Bell, James S., M.D., Cedar Falls, Iowa.
1857. Bell, William C., M.D., Middletown, Conn.
1872. Bender, Prosper, M.D., Quebec, Dominion of Canada.
1872. Benham, F. A., M.D., Bronson, Mich.

1869. Bennett, Hollis K., M.D., Fitchburg, Mass.
1865. Benson, P. Oscar C., M.D., Skaneateles, N. Y.
1874. Bennit, William W., M.D., Washington, D. C.
1872. Berghaus, Alex., M.D., 49 W. 24th St., New York.
1858. Berghaus, Julius M., M.D., 49 W. 24th St., New York.
1870. Betts, B. Frank, M.D., 1700 Girard Av., Philadelphia.
1869. Bevin, William A., M.D., Keyport, N. J.
1874. Biegler, Joseph A., M.D., Rochester, N. Y.
1854. Bigelow, Franklin, M.D., 110 S. Salina St., Syracuse, N. Y.
1868. Biggar, Hamilton F., M.D., Cleveland, O.
1871. Bingaman, C. F., M.D., Pittsburg, Pa.
1869. Birch, George B., M.D., Hannibal, Mo.
1854. Bishop, D. F., M.D., Lockport, N. Y.
1869. Bishop, Herbert M., M.D., 87 Franklin St., Norwich, Conn.
1870. Bishop, Lewellyn A., M.D., Fond du Lac, Wis.
1869. Bishop, R. S., M.D., Medina, N. Y.
1853. Bissell, Arthur F., M.D., 157 Maiden Lane, N. Y.
1872. Blake, Mary J. Safford, M.D., 16 Boylston Pl., Boston, Mass.
1867. Blakelock, Ralph, M.D., 354 W. 24th St., New York.
1869. Bloss, J. P., M.D., Troy, N. Y.
1865. Boericke, F. E., M.D., 635 Arch St., Philadelphia, Pa.
1874. Bollen, George M., M.D., South Australia.
1874. Bond, Mary E., M.D., New York.
1866. Borland, W. C., M.D., Pittsburg, Pa.
1872. Bossert, Charles, M.D., 2350 Second Av., New York.
1870. Botsford, Alva H., M.D., Grand Rapids, Mich.
1869. Bowen, G. W., M.D., Fort Wayne, Ind.
1871. Bowie, Alonzo P., M.D., Uniontown, Pa.
1869. Bowman, Benjamin, M.D., Harrisburg, Pa.
1866. Boyce, C. William, M.D., Auburn, N. Y.
1870. Boyer, Francis W., M.D., Pottsville, Pa.
1874. Boynton, Frank H., M.D., New York.
1860. Bradford, F. Standish, M.D., 55 W. 34th St., New York.
1871. Bradford, Herbert C., M.D., Lewiston, Me.
1869. Bradford, Thomas L., M.D., Reading, Mass.
1865. Bradford, T. C., M.D., 170 W. Fourth St., Cincinnati, O.
1873. Bradford, Oliver L., M.D., Andover, Mass.
1874. Bradner, Fred. H., M.D., Middletown, N. Y.
1853. Brainerd, Jehu, M.D., Washington, D. C.
1869. Breyfogle, Charles W., M.D., San José, Cal.
1873. Breyfogle, W. L., M.D., Louisville, Ky.
1869. Brick, Francis, M.D., Keene, N. H.
1869. Brigham, G. N., M.D., Montpelier, Vt.
1874. Brigham, Reeder S., M.D., Cairo, Ill.

1869. Briry, Milton S., M.D., Bath, Me.
1859. Brooks, Charles A., M.D., Clinton, Mass.
1872. Brooks, Chas. G., M.D., East Boston, Mass.
1871. Brown, Benj. P., M.D., Cleveland, O.
1869. Brown, D. M., M.D., Los. Angeles, Cal.
1867. Brown, Edward V., M.D., Tarrytown, N. Y.
1869. Brown, Granville Curtis, M.D., 29 West 30th Street, New York.
1867. Brown, Henry R., M.D., Leominster, Mass.
1867. Brown, Titus L., M.D., 45 Collier St., Binghamton, N.Y.
1872. Brown, William, M.D., 647 N. 10th St., Philadelphia, Pa.
1872. Brown, Samuel, M.D., 651 N. 10th St., Philadelphia, Pa.
1874. Brown, Charles R., M.D., Lynn, Mass.
1867. Browne, Gardner S., M.D., Hartford, Conn.
1871. Bryan, Wm. J., M.D., Corning, N. Y.
1874. Bryan, Edward W., M.D., Ovid, N. Y.
1867. Bryant, Melville, M.D., 374 Adelphi St., Brooklyn, N.Y.
1869. Buck, J. D., M.D., 305 Race St., Cincinnati, O.
1868. Budlong, John C., M.D., Centredale, R. I.
1873. Buffum, J. H., M.D., 324 Penn Avenue, Pittsburg, Pa.
1867. Bumstead, S. J., M.D., Pekin, Ill.
1867. Bunting, Thomas C., M.D., East Mauch Chunk, Pa.
1872. Burdick, Alice De Baun, M.D., New York City.
1867. Burdick, Stephen P., M.D., 351 W. 34th St., New York.
1854. Burgher, J. C., M.D., 332 Penn Av., Pittsburg, Pa.
1874. Burnett, W. H., M.D., Matawan, N. J.
1859. Burpee, John A., M.D., Malden, Mass.
1869. Burr, Charles H., M.D., Portland, Me.
1870. Bushnell, Lafayette, M.D., 57 Bond St., New York City.
1873. Butler, W. M., M.D., Middletown, New York.
1871. Cadmus, James M., M.D., Hammondsport, N. Y.
1868. Calvert, William J., M.D., Jackson, Mich.
1858. Campbell, M. W., M.D., Troy, N. Y.
1867. Campbell, C. E., M.D., 314 E. 18th St., N. Y.
1874. Campbell, Merrett B., M.D., Joliet, Ill.
1873. Canfield, Corresta T., M.D., Titusville, Pa.
1874. Carmichael, Jas. A., M.D., New York.
1869. Carpenter, Charles H., M.D., 1 Fifth St., Troy, N. Y.
1870. Carr, Marvin S., M.D., Galesburg, Ill.
1871. Carroll, Stephen H., M.D., Albany, N. Y.
1873. Caruthers, R. E., M.D., 294 Penn Avenue, Pittsburg, Pa.
1854. Cate, Shadrach M., M.D., Salem, Mass.
1859. Chamberlain, William B., M.D., Worcester, Mass.
1873. Chantler, I. B., M.D., Alleghany City, Pa.
1871. Chase, Maurice J., M.D., Galesburg, Ill.

1873. Chase, Sara B., M.D., Cleveland, O.
1869. Cheever, D. A., M.D., Champaign, Ill.
1870. Cheney, Benjamin H., M.D., 189 Church St., New Haven, Conn.
1871. Child, Nelson N., M.D., Ogdensburg, N. Y.
1865. Childs, W. R., M.D., 204 Penn Av., Pittsburg, Pa.
1870. Chittenden, George W., M.D., Janesville, Wis.
1871. Church, Charles A., M.D., Norwich, N. Y.
1871. Clapp, Herbert C., M.D., 518 Tremont St., Boston, Mass.
1850. Clark, J. K., M.D., Sacramento, Cal.
1872. Clark, J. J., M.D., Washington, D. C.?
1874. Clark, Jos. N., M.D., Harrisburg, Pa.
1854. Clarke, Henry B., M.D., New Bedford, Mass.
1859. Clarke, John L., M.D., Fall River, Mass.
1860. Clay, G. B. L., M.D., Moorestown, N. J.
1867. Cleaveland, William L., M.D., Atlanta, Ga.
1869. Cloud, Charles R., M.D., Burlington, N. J.
1869. Cloud, J. A., M.D., 914 S. 19th St., Philadelphia, Pa.
1869. Coburn, Edward S., M.D., 70 Second St., Troy, N. Y.
1874. Coburn, Jesse M., M.D., South Framingham, Mass.
1869. Cochran, Charles A., M.D., Winthrop, Me.
1865. Coffreen, J. Q. A., M.D., Dayton, O.
1866. Cogswell, C. H., M.D., Clinton, Iowa.
1870. Colburn, S. H., M.D., Springfield, Vt.
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1871. Cole, H. P., M.D., 23 University Place, Chicago, Ill.
1869. Cole, S. P., M.D., 23 University Place, Chicago, Ill.
1851. Collins, H. A., M.D., Springfield, Mass.
1874. Colton, Henry E., M.D., Buffalo, N. Y.
1869. Compton, J. Augustine, M.D., Indianapolis, Ind.
1867. Comstock, Albert L., M.D., Mount Kisco, N. Y.
1874. Conant, Clarence M., M.D., Cornwall-on-Hudson, N. Y.
1869. Cook, Charles P., M.D., Hudson, N. Y.
1867. Cook, E. G., M.D., 342 Washington St., Buffalo, N. Y.
1866. Cook, William H., M.D., Carlisle, Pa.
1872. Cook, Susan S., M.D., Buffalo, N. Y.
1854. Cooke, N. F., M.D., 360 Michigan Av., Chicago, Ill.
1874. Coon, Henry C., M.D., Alfred Centre, N. Y.
1866. Cooper, J. F., M.D., Alleghany, Pa.
1866. Cooper, Frank B., M.D., Alleghany, Pa.
1874. Corbin, John L., M.D., Athens, Pa.
1869. Corcoran, Luke, M.D., Springfield, Mass.
1873. Cossaart, A. B., M.D., Otego, N. Y.
1856. Côté, Marcellin, M.D., 284 Penn Av., Pittsburg, Pa.
1869. Covert, Nelson B., M.D., Geneva, N. Y.

1871. Covert, Rynear B., M.D., Seneca Falls, N. Y.
1865. Cowley, David, M.D., Station A, Pittsburg, Pa.
1854. Cox, James W., M.D., Albany, N. Y.
1869. Cragin, F. M., M.D., Norwood, Mass.
1867. Craig, J. D., M.D., Niles, Mich.
1874. Crater, Henry, M.D., Somerville, N. J.
1869. Crispell, G. D., M.D., Kingston, N. Y.
1865. Cropper, Charles C., M.D., Oxford, Butler Co., O.
1869. Cross, Hiram B., M.D., Jamaica Plain, Mass.
1869. Cross, William P., M.D., 476 Broadway, S. Boston, Mass.
1859. Cullis, Charles, M.D., 16 Somerset St., Boston, Mass.
1867. Currier, C. B., M.D., Middlebury, Vt.
1874. Curtis, R. J., M.D., Mayville, N. Y.
1867. Cushing, Alvin M., M.D., Lynn, Mass.
1869. Cutler, William C., M.D., Chelsea, Mass.
1866. Dake B. F., M.D., Pittsburg, Pa.
1852. Dake, Jabez P., M.D., 21 N. Vine St., Nashville, Tenn.
1872. Dake, William C., M.D., Nashville, Tenn.
1870. Danforth, Willis, M.D., 1224 Wabash Av., Chicago, Ill.
1874. Darling, Henry H., M.D., Keene, N. H.
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1869. De Derkey, F. F., M.D., Mobile, Ala.
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1869. Dennis, L., M.D., Newark, N. J.
1851. Denison, Jeremiah T., M.D., Fairfield, Conn.
1858. Detwiler, J. J., M.D., Easton, Pa.
1873. Detwiler, W. M., M.D., Findley, O.
1858. Dinsmore, J. Pitman, M.D., 107 O'Farrell Street, San Francisco, Cal.
1868. Doran, Charles R., M.D., Hagerstown, Md.
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1867. Dowling, John W., M.D., 568 Fifth Av., New York.
1871. Drake, Jason W., M.D., Dover, N. H.
1871. Drake, Olin M., M.D., Ellsworth, Me.
1871. Dreher, Charles B., M.D., Tamaqua, Pa.
1871. Dubs, Samuel R., M.D., Doylestown, Pa.
1869. Dudley, Pemberton, M.D., 684 N. 12th St., Philadelphia.
1866. Duncan, T. Cation, M.D., 287 W. Randolph St., Chicago.
1860. Dunham, Carroll, M.D., Irvington-on-Hudson, N. Y.
1874. Dunn, J. L., M.D., Titusville, Pa.

1873. Dunning, Julia A., M.D., Corry, Pa.
1866. Earhart, J. R., M.D., 1839 Arch St., Philadelphia.
1859. Eaton, Hosea B., M.D., Rockport, Me.
1874. Eddy, Hiram L., M.D., Geneva, N. Y.
1874. Edmonds, Wm. A., M.D., Memphis, Tenn.
1871. Edmundson, Walter F., M.D., Pittsburg, Pa.
1872. Edson, Susan A., M.D., Washington, D. C.
1868. Eggert, William, M.D., Indianapolis, Ind.
1873. Eldridge, I. M., M.D., Flint, Mich.
1873. Eldridge, C. S., M.D., 972 Wabash Av., Chicago, Ill.
1869. Elliott, Joseph B., M.D., 493 Clinton Av., Brooklyn, N.Y.
1857. Ellis, John, M.D., 14 W. 27th St., New York.
1873. Ensign, Jennie, M.D., 357 W. 34th St., New York.
1867. Ermentraut, John P., M.D., 265 E. 4th St., New York.
1872. Esten, John, M.D., San Francisco, Cal.
1874. Evans, Albert J., M.D., Lockport, N. Y.
1870. Evans, C. Horace, M.D., Indianapolis, Ind.
1872. Everett, Mary H., M.D., 333 W. 34th St., New York.
1871. Fager, Charles B., M.D., Harrisburg, Pa.
1870. Fairbanks, Charles D., M.D., 28 Warren Av., Chicago, Ill.
1867. Fanning, Thomas C., M.D., Tarrytown, N. Y.
1859. Farnsworth, Charles H., M.D., E. Cambridge, Mass.
1872. Farrington, E. A., M.D., 1616 Mt. Vernon St., Philadelphia, Pa.
1866. Faulkner, R., M.D., Erie, Pa.
1871. Fetterhoff, Hiram R., M.D., Baltimore, Md.
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1855. Fincke, Bernhardt, M.D., 122 Livingston St., Brooklyn, N. Y.
1867. Fish, Chas. F., M.D., Newark, N. J.
1873. Fisher, A. Le Roy, M.D., Elkhart, Ind.
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1867. Flagg, Levi W., M.D., Yonkers, N. Y.
1869. Flanders, David P., M.D., Belfast, Me.
1850. Foote, George F., M.D., Stamford, Conn.
1874. Forbes, Geo. F., M.D., West Brookfield, Mass.
1867. Foster, Wm. D., M.D., Hannibal, Mo.
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1867. Franklin, E. C., M.D., 1402 Olive St., St. Louis, Mo.
1874. Frantz, Albert J., M.D., Canoga, N. Y.
1873. Frasier, Jerome B., M.D., Conneautville, Pa.
1858. Freeman, W., M.D., 39 W. 36th St., New York.
1860. Freeman, Wm. E., M.D., Wilmington, N. C.
1858. Freligh, Martin, M.D., 31 W. 24th St., New York.

1871. French, Harriet S., M.D., 238 N. 9th St., Philadelphia.
1866. Friese, Michael, M.D., Harrisburg, Pa.
1872. Frye, Moses M., M.D., Auburn, New York.
1874. Fuller, Edward E., M.D., Buffalo, N. Y.
1858. Füllgraff, Otto, M.D., 53 Irving Place, New York.
1874. Fulton, Henry W., M.D., Pittsburg, Pa.
1869. Gale, J. A., M.D., West Medway, Mass.
1859. Gale, Stephen M., M.D., Newburyport, Mass.
1868. Gallinger, Jacob H., M.D., Concord, N. H.
1851. Gambell, W. P., M.D., 2 Rutland St., Boston, Mass.
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1869. Gardiner, M. M., M.D., Utica, N. Y.
1865. Garside, W. B., M.D., 63 Greene Avenue, Brooklyn, N. Y.
1869. Gause, Owen B., M.D., 140 N. 12th St., Philadelphia.
1873. Gaylord, E. P., M.D., Toledo, O.
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1869. Gifford, Gilbert L., M.D., Hamilton, N. Y.
1872. Gilchrist, J. G., M.D., Tidioute, Pa.
1859. Goedecke, L., M.D., Belle Plaine, Iowa.
1870. Gordon, George A., M.D., Sandusky, O.
1869. Gottschalk, Wm. von, M.D., 243 Westminster St., Providence, R. I.
1872. Goucher, E. T., M.D., Alliance, O.
1870. Graham, E. B., M.D., Three Rivers, Mich.
1869. Gramm, Gustavus E., M.D., 1656 Vienna St., Philad'a.
1872. Grant, Benj. F., M.D., Bath, N. Y.
1869. Graves, S. P., M.D., Saco, Me.
1871. Greenleaf, John T., M.D., Owego, N. Y.
1855. Gregg, Rollin R., M.D., 42 S. Division St., Buffalo, N. Y.
1874. Gregory, Edward P., M.D., Milford, Conn.
1869. Griffith, J. J., M.D., Manayunk, Philadelphia, Pa.
1872. Griswold, W. N., M.D., San Francisco, Cal.
1869. Groot, S. I., M.D., 344 New York Avenue, Washington, D. C.
1872. Gross, Maria M., M.D., Gardner House, Chicago, Ill.
1874. Grosvenor, Lemuel C., M.D., Chicago, Ill.
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1874. Guernsey, W. N., M.D., New York.
1869. Guild, Phineas K., M.D., Columbia, S. C.
1867. Gumpert, B. B., M.D., 840 Franklin St., Philadelphia.
1865. Gunkle, Henry, M.D., Newport, Ky.
1870. Gwynn, Wm. M., M.D., Throopsville, N. Y.
1869. Haeseler, Charles H., M.D., 2009 Arch St., Philadelphia.

1872. Haines, Jas. W., M.D., Waynesville, O.
1865. Hale, Edwin M., M.D., 65 22d St., Chicago, Ill.
1850. Hall, Geo. A., M.D., Chicago, Ill.
1869. Hall, John, M.D., 33 Richmond St., Toronto, Ontario.
1873. Hall, E. M., M.D., Fredericktown, O.
1873. Hall, John B., M.D., St. Paul, Minn.
1874. Hall, Robert, M.D., Providence, R. I.
1874. Hamisfar, Chas. W., M.D., St. Mary's, O.
1871. Hammond, Albert, M.D., Hagerstown, Md.
1852. Hammond, Milton, M.D., 57 N. Paca St., Baltimore, Md.
1865. Haynes, J. R., M.D., Indianapolis, Ind.
1871. Hardy, James E., M.D., 234 Madison Av., Baltimore.
1857. Harris, Charles Taylor, M.D., Ypsilanti, Mich.
1868. Hasbrouck, Stephen, M.D., 108 W. 34th St., New York.
1857. Hatch, Philo L., M.D., Minneapolis, Minn.
1867. Harding, Evan B., M.D., Northampton, Mass.
1858. Hawley, L. B., M.D., Phœnixville, Pa.
1869. Hawley, William A., M.D., Syracuse, N. Y.
1874. Hayward, Abner, M.D., Mt. Clemens, Mich.
1869. Hayward, Joseph W., M.D., Taunton, Mass.
1873. Hayward, Milton P., M.D., Oberlin, O.
1870. Heaton, J. G., M.D., Alliance, O.
1869. Hedges, S. P., M.D., 917 N. Clark St., Chicago, Ill.
1853. Helmuth, Wm. Tod, M.D., 21 W. 37th St., New York.
1867. Hemenway, Horace P., M.D., E. Somerville, Mass.
1874. Herron, Charles D., M.D., Pittsburg, Pa.
1867. Heurtley, R. Walter, M.D., 107 4th Av., New York.
1871. Higbee, Albert E., M.D., Red Wing, Minn.
1871. Higbee, Chester G., M.D., St. Paul, Minn.
1867. Hill, Robert L., M.D., Dubuque, Iowa.
1870. Hills, Alfred K., M.D., 20 E. 24th St., New York.
1869. Hiller, Frederick, M.D., San Francisco, Cal.
1873. Hiller, Frederick, Jr., M.D., San Francisco, Cal.
1867. Hinds, W. H. H., M.D., Milford, N. H.
1867. Hinks, E. F., M.D., Marlborough, Mass.
1867. Hitchcock, H. M., M.D., 51 E. 30th St., New York.
1873. Hitchcock, Dexter, M.D., Norwalk, Conn.
1859. Hobson, Joseph V., M.D., Richmond, Va.
1867. Hocking, William F., M.D, Cleveland, O.
1869. Hoffendahl, H. L. H., M.D., 25 Somerset St., Boston, Mass.
1854. Hoffman, H. H., M.D., 216 Penn Av., Pittsburg, Pa.
1860. Holcombe, William H., M.D., New Orleans, La.
1874. Hollet, Arthur P., M.D., Havana, N. Y.
1857. Holt, Aaron P., M.D., Lyndon, Ill.

1869. Holt, Edward B., M.D., Chelsea, Mass.
1870. Holt, L. E. B., M.D., Marshalltown, Iowa.
1866. Homer, Horace, M.D., Plainfield, N. J.
1869. Hoppin, Courtland, M.D., Providence, R. I.
1867. Hornby, John, M.D., Poughkeepsie, N. Y.
1858. Hotchkiss, Jesse T., M.D., Cornwall, Orange Co., N. Y.
1859. Houghton, H. A., M.D., Keeseville, N. Y.
1867. Houghton, Henry C., M.D., 50 W. 33d St., New York.
1870. Hoxsie, Augustus C., M.D., Buffalo, N. Y.
1867. Hoyne, Temple S., M.D., 817 Wabash Av., Chicago.
1869. Humphrey, Otis M., M.D., Minneapolis, Minn.
1869. Hoyt, William Henry, M.D., Syracuse, N. Y.
1869. Huebener, O. T., M.D., Litiz, Pa.
1870. Huebenger, John A., M.D., Wyoming, O.
1867. Hund, H. B., M.D., 128 Forsyth St., New York.
1867. Hunt, F. W., M.D., 255 E. 59th St., New York.
1867. Hunt, Henry F., M.D., 315 Market St., Camden, N. J.
1865. Hunt, James G., M.D., Cloverport, Ky.
1865. Hunt, W. H., M.D., Covington, Ky.
1873. Hunt, J. B., M.D., Indianapolis, Ind.
1874. Hunt, Dwight B., M.D., New York.
1873. Hurd, Edwin H., M D., Rochester, N. Y.
1871. Hunting, Nelson, M.D., Albany, N. Y.
1869. Huson, Samuel K., M.D., Lawrence, Kansas.
1872. Hutchins, H. S., M.D., Batavia, N. Y.
1867. Ingalls, Frederic W., M.D., Kingston, N. Y.
1871. Iszard, Jacob, M.D., Glassboro, N. J.
1871. Jackson, Mercy B., M.D., 681 Tremont St., Boston, Mass.
1869. Jacobson, Edward H., M.D., Bethlehem, Pa.
1859. James, Bushrod W., M.D., N. E. corner 18th and Green Sts., Philadelphia.
1866. James, J. E., M.D., 1013 Green St., Philadelphia.
1867. Jayne, De Witt C., M.D., Florida, N. Y.
1874. Jaynes, A. W., M.D., Syracuse, N. Y.
1859. Jefferds, George P., M.D., Bangor, Me.
1873. Jenny, William H., M.D., Kansas City, Mo.
1869. Jernegan, H. Mayhew, M.D., 133 W. Newton St., Boston, Mass.
1859. Johnson, Daniel A., M.D., 20 Worcester St., Boston, Mass.
1869. Johnson, I. W., M.D., Peoria, Ill.
1860. Johnson, Isaac D., M.D., Kennett Square, Pa.
1870. Johnson, R. B., M.D., Ravenna, O.
1874. Johnson, Joseph D., M.D., Hartford, Conn.
1854. Jones, Elijah U., M.D., Taunton, Mass.

1867. Jones, Henry C., M.D., Mount Vernon, N. Y.
1858. Jones, Joseph E., M.D., West Chester, Pa.
1868. Jones, S. A., M.D., 230 W. 25th St., New York.
1867. Jones, William A., M.D., Wilton, N. H.
1873. Jones, Gaius J., M.D., Grafton, O.
1874. Jones, Charles E., M.D., Albany, N. Y.
1853. Joslin, Benjamin F., M.D., 50 W. 29th St., New York.
1871. Karsner, Charles, M.D., 4845 Germantown Av., Philada.
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1872. Kennedy, J. C., M.D., East Birmingham, Pa.
1853. Kenyon, L. M., M.D., 86 W. Mohawk St., Buffalo, N. Y.
1874. Kenyon, William B., M.D., Buffalo, N. Y.
1874. Kern, William H., M.D., McKeesport, Pa.
1870. King, E. H., M.D., Clinton, Iowa.
1869. Kinne, Theodore Y., M.D., Paterson, N. J.
1870. Kippax, John R., M.D., Wheaton, Ill.
1869. Kittinger, Leonard, M.D., Wilmington, Del.
1874. Knapp, Theodore S., M.D., Union, N. Y.
1871. Kneass, Nicholas W., M.D., Baltimore, Md.
1871. Knerr, Calvin B., M.D., 112 N. 12th St., Philadelphia.
1867. Knight, Elam C., M.D., Waterbury, Conn.
1874. Knight, Edward B., M.D., Providence, R. I.
1871. Knowles, William K., M.D., Georgetown, Col.?
1865. Krebs, Francis H., M.D., 42 Union Park, Boston, Mass.
1867. Kuhn, Carl W., M.D., 59 Bond St., New York.
1869. Kummel, Ernst R., M.D., Milwaukee, Wis.
1874. Laird William F., M.D., Watertown, N. Y.
1860. Lee, J. K., M.D., 3800 Chestnut St., Philadelphia.
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1873. Leonard, W. H., M.D., Minneapolis, Minn.
1871. Lewis, Henry M., M.D., 78 Orange St., Brooklyn, N. Y.
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1874. Libby, Charles A., M.D., Arlington, Mass.
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1874. Linnell, Jonathan E., M.D., Norwich, Conn.
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1869. Loring Charles P., M.D., Providence, R. I.
1858. Lougee, William H., M.D., Lawrence, Mass.

1868. Ludlam, Edward M. P., M.D., 318 W. Washington St., Chicago, Ill.
1857. Ludlam, Reuben, M.D., 526 Wabash Av., Chicago, Ill.
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1873. Lukens, M. B., M.D., Cleveland, O.
1870. Lungren, Samuel S., M.D., Toledo, O.
1873. McChesney, A. C., M.D., College Hill, O.
1860. McClatchey, R. J., M.D., 918 N. 10th St., Philada., Pa.
1867. McClelland, J. H., M.D., 316 Penn Av., Pittsburg, Pa.
1873. McDermott, George C., M.D., Warren, Pa.
1874. McDonald, William O., M.D., New York.
1874. McLaren, William B., M.D., Oak Park, Ill.
1868. Macfarlan, Malcolm, M.D., 1721 Chestnut St., Phila., Pa.
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1867. Macomber, Addison P., M.D., Hackensack, N. J.
1860. Malin, John, M.D., 70 W. Chelten Av., Germantown, Philadelphia.
1871. Malin, William H., M.D., Chestnut Hill, Philada., Pa.
1867. Mandeville, F. B., M.D., Newark, N. J.
1872. Manson, Charles A., M.D., Springfield, Mass.
1868. Marix, Martin Mayer, M.D., Denver, Col.
1871. Martin, Constantine H., M.D., Allentown, Pa.
1868. Martin, H. N., M.D., 500 N. 18th St., Philadelphia, Pa.
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1867. Mason, S. R., M.D., Duvall's Bluff, Ark.
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1859. Matthes, G. Felix, M.D., New Bedford, Mass.
1873. Mera, H. P., M.D., Pottsville, Pa.
1871. Mercer, Robert P., M.D., Chester, Pa.
1871. Middleton, Caleb S., M.D., 646 N. 10th St., Philada., Pa.
1869. Middleton, Melbourne F., M.D., Camden, N. J.
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1869. Minor, John C., M.D., 10 E. 41st St., New York.
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1866. Mitchell, John J., M.D., Newburgh, N. Y.
1867. Mitchell, J. W., M.D., 366 Clermont Av., Brooklyn, N. Y.

1867. Moffat, Reuben C., M.D., 17 Schermerhorn St., Brooklyn, N. Y.
1867. Montanye, William D. L., M.D., Rondout, N. Y.
1874. Monroe, G. T., M.D., Mercer, Pa.
1869. Moore, James Otis, M D., Haverhill, Mass.
1868. Moore, John, M.D., Liverpool, Eng.
1860. Moore, Joseph, M.D., Bridgeton, N. J.
1860. Moore, Thomas, M.D., N.E. cor. West Walnut Lane and Green St., Germantown, Philadelphia.
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1867. Morgan, John C., M.D., 1700 Chestnut St., Philada., Pa.
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1869. Morse, Martin V. B., M.D., Marblehead, Mass.
1867. Morse, Nathan R., M.D., Salem, Mass.
1872. Morse, Lucius D., M.D., Memphis, Tenn.
1869. Mosman, Nathan A., M.D., Norwalk, Conn.
1869. Mull, P. W., M.D., Ghent, N. Y.
1859. Munde, Charles, M.D., Wurzburg, Germany.
1867. Munsey, Barton, M.D., 2403 Washington St., St. Louis.?
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1872. Nichol, Thomas, M.D., Montreal, D. of Canada.
1867. Nichols, Frank, M.D., Hoboken, N. J.
1859. Nichols, Lemuel B., M.D., Worcester, Mass.
1874. Nichols, G. F., M.D., Boston, Mass.
1872. Norton, George S., M.D., Ophthalmic Hospital, New York.
1873. Norton, Charles A., M.D., Portsmouth, N. H.
1869. Nott, Eliphalet, M.D., 22 Jefferson St., Brooklyn, N. Y.
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Corresponding Members.

1873. Dr. Tomaso Cigliano, Naples, Italy.
1873. Dr. Sambhul Mukhopàdhyàya, Wellington Square, Calcutta, India.

SECTION II.

REPORT

OF THE

BUREAU OF MATERIA MEDICA, PHARMACY,

AND

PROVINGS,

T. F. ALLEN, M.D., ... New York.
H. H. BAXTER, M.D., ... Cleveland.
W. McGEORGE, M.D., ... Woodbury, N. J.
WILLIAM E. PAYNE, M.D., ... Bath, Me.
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J. P. DAKE, M.D., ... Nashville, Tenn.
C. HERING, M.D., ... Philadelphia.
CHARLES C. CROPPER, M.D., ... Oxford, O.

TO THE

TWENTY-SEVENTH SESSION

OF THE

American Institute of Homœopathy.

VOLUME I. NUMBER 8.

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XLV.

VINDICATION OF THE BUREAU OF MATERIA MEDICA.

By J. P. Dake, M.D., Nashville, Tenn.

I desire to call the attention of the Institute, for a moment, to some remarks in a paper from the Bureau of Materia Medica, by Dr. William E. Payne, read at our last meeting, reflecting improperly upon the Bureau of Materia Medica, and especially upon myself as a member of that bureau.

Dr. Payne said, "I had the honor of making a short *appeal* to the Institute last year for the immediate publication of a *complete Materia Medica*, setting forth briefly the grounds of importance and necessity, and asked a formal and hearty expression of the wishes of the Institute in favor of the enterprise. This *appeal* was accompanied by a resolution unanimously adopted by the Maine Homœopathic Medical Society, urging the importance of the same thing.

"Both the *appeal* and resolution, on motion of Dr. Guy, of Brooklyn, N. Y., were referred to the Bureau of Materia Medica, with instructions to report to that meeting some plan of action with reference to the matter of the communication.

"Dr. J. P. Dake, of Nashville, Tenn., in his official position as a member of the bureau, assumed to speak for that body, and the following is a transcript of his report, according to the published proceedings of the Institute for 1872: 'The immediate publication of a *full and complete* Homœopathic Materia Medica, urged by the Homœopathic Medical Society of Maine, and referred to this bureau for consideration, is a subject of such importance, and is so intimately connected with the matter of a

more thorough and correct proving of medicines, upon which we are already instructed to report at the next meeting, we deem it advisable to make no recommendation at this time.

"'The labor and expense of gathering all of our present provings together in several large volumes would be very great, and, in our judgment, should be deferred till we consider fully the practicability of re-proving our remedies, under conditions and in ways calculated to separate more completely the genuine from the spurious, the characteristic from the common, in our vast collections of drug symptoms.'

"I do not propose to discuss here the propriety of presenting the above-quoted report as the sentiment of the Bureau of Materia Medica, when several members of that body were absent, whose opinions, as a matter of course, could not be obtained, but come directly to the main points of the report upon which you will be called to act in the disposition of another report embodying plans for the re-proving of the Materia Medica, which will come before you at this meeting. I will simply remark here, in passing, that the acceptance of Dr. Dake's report, without a dissenting voice, is evidence to my mind, that the general belief of the profession, with reference to the true method of purifying the Materia Medica, is running in the wrong direction."

It is surprising that so old a member as Dr. Payne should not know that when the Institute is convened in annual session, its several bureaus are regarded as in working order, whichever of their members may be absent.

A subject coming legitimately within the province of a bureau, may be referred by the Institute to that body for special consideration (and I may add has often been so referred), whether a fraction or a majority of such bureau be present or absent.

And a report upon the subject so referred, agreed upon by all the members present, may be, often has been, and always should be, presented as the report of the bureau.

Now Dr. Payne's *appeal* and the resolution of the Maine Society were referred, very properly, to the Bureau of Materia Medica, and were duly considered by all the members present, and the report which I had the honor of making to the Institute, bearing on those matters, was not simply *my report*, as an indi-

vidual, nor as an individual member of that bureau, but coming through me as its temporary chairman, *it was the report of the Bureau of Materia Medica.* I did not "*assume* to speak for that body." I assumed nothing, but simply discharged a legitimate official duty. Let any other principle be recognized here, let any bureau decline to act because all of its members are not present, and a general suspension of business would result.

We cannot afford to come here from all parts of the United States to transact business for the profession, and then allow our hands to be tied, and no business to be transacted, because some of our members are absent.

There are members in our bureaus, appointed year after year, whose faces have been seen at hardly one of our meetings, and many others who come but rarely.

Shall such be allowed, while at home pursuing their individual daily business, to prevent us, who drop our personal interests and come here to work for the general good, from the performance of duties assigned to our several bureaus?

Shall we be compelled to do nothing till they are consulted, and their wishes ascertained upon any measure in hand?

The *appeal* of Dr. Payne and the resolution of the Maine Society were rightly referred, fully considered, and the report thereon, which I had the honor of presenting at the meeting in Washington, was the legitimate and official report of the Bureau of Materia Medica, unanimously accepted by the Institute.

XLVI.

A COLLEGE OF DRUG PROVERS, FOR THE CULTIVATION OF MATERIA MEDICA.

By J. P. Dake, M.D., Nashville, Tenn.

At the last meeting of the Institute I had the pleasure of presenting from the Bureau of Materia Medica a plan in outline of a National College of Drug Provers, which elicited some discussion, and which, together with the speeches thereupon, was referred to a special committee with instructions to report during the then present session.

The committee, through their chairman, Dr. Talbot, reported, recommending that "*The Bureau of Materia Medica, Pharmacy, and Provings be requested to continue their investigations on this subject, and that it be made a topic of discussion at the next session of the Institute.*"

During the year that has elapsed several publications bearing on the subject have appeared, developing some interest and some points worthy of notice here.

I. *Instance Defects.*

In the *North American Journal of Homœopathy*, vol. xxii, page 378, Dr. Lilienthal, in some editorial notes, says: "We would beg Dr. Dake to instance. Let him take a remedy and *show* in its pathogenesis those defects which he purposes to remedy."

In reply I may *instance* Belladonna, the symptoms of which have been critically reviewed by Dr. Hughes, of England, the results being published in the last volume of the *British Journal*

of Homœopathy. The defects pointed out by him are only in the symptoms gathered by Hahnemann from toxicological and clinical records. He could not reach the original reports of symptoms as given by the various provers, they having been altogether lost to the world, like the original records of more than nine-tenths of all the old provings.

If by his request Dr. Lilienthal would intimate that I am unable to specify *all and singular* the defects existing in the pathogenesis of any one of our old remedies, his intimation is well founded.

I cannot point out all such defects; nor is there a man living who can. Could I do it, or could any one else do it, I should not stand here to advocate the re-proving of drugs in a college of provers, nor would Dr. Payne contend for his "clinical verifications," nor would Dr. Hering continually write of the "harvest-time" in the far-away future, when the tares may be gathered from the wheat and cast into the fire.

How to detect and avoid the errors of drug pathogenesis is to-day the question of all questions.

But if Dr. Lilienthal would intimate by his request that there are no defects in our drug pathogeneses that need to be remedied, I have nothing to offer for his enlightenment. I can only point to the whole literature of homœopathy in proof of his great mistake.

I have asserted repeatedly, and so have many others not ignorant of what is set forth in the homœopathic Materia Medica, that the provings are defective, and the symptoms, as set forth, a conglomeration of the true and the false, the genuine and the spurious; as a whole, unworthy of our great therapeutic law.

If any writer has ventured to contradict such a statement, I have failed utterly to obtain any knowledge of him, unless the call made upon me by Dr. Lilienthal may be regarded as placing him in that rôle. The whole homœopathic profession has seemed to be only too painfully convinced of the imperfections of the Materia Medica, and I am sure the cry of "iconoclast" will come from very few, when one essays to speak faithfully of the impurities of its sources and the errors of its make-up. Earnest minds have been casting about for the best ways and means

whereby to effect its improvement. Some would have the remedies differently classified, upon one basis or another. Some would have the symptoms rearranged, so as to exhibit their natural order and pathological meanings; while all desire a "weeding out" of the spurious and the worthless.

Some would have the weeding done by "clinical verifications," and others by the healthy vital test properly applied. Some have been convinced of the necessarily defective character of the Materia Medica, by looking closely into the history of our drug provings, and into the toxicological and clinical records which have furnished such vast displays of symptoms; while all engaged in practice have seen enough *homœopathic non-cures* to convince them that perfection in drug pathogenesy is not yet reached.

"Do men gather grapes of thorns, or figs of thistles?"

Can the pure and uniform effects of drugs in the human organism be obtained by trials, such as we have had, of various doses upon the well in part and the sick in part, here, there, and everywhere, with few or no critical diagnostic tests, and no uniform modes of noting symptoms?

"Can a corrupt tree bring forth good fruit?"

II. *Give Examples.*

In a paper read before the Institute at its last meeting, Dr. Payne said: "If the advocates of re-proving seriously believe that the Materia Medica can be purged of its impurities in the way they propose, let them make good their belief, and illustrate the superiority of their plan by giving to the profession a single example. Let them re-prove say Phosphorus, Sulphur, or Lycopodium, and thus afford the profession an opportunity to judge by comparison whether the complete purification of our Materia Medica could be effected by any process of re-proving which they may have to offer."

It is certainly surprising that the advocates of re-proving have so entirely failed to make Dr. Payne understand their objects and plans.

If we had a college of provers, embracing a competent faculty and corps of provers, twenty or twenty-five in number, some

male and some female, well selected and well qualified in the art of observing, supplied with all needed diagnostic means and apparatus, we might re-prove Phosphorus or Sulphur or Lycopodium, and so furnish a single example for the doctor. And if we had such an institution established and in proper working order, so as to furnish *an example*, we would no longer have to plead for a college of provers. It would stand forth its own great advocate, admired and sustained by all the lovers of true medical science.

But such an institution we have not yet, and so not one and not all the advocates of re-proving can furnish an example of what it would be able to supply in the form of drug pathogenesis.

One or two individuals, unless able and willing, like James Smithson, cannot call into immediate existence an institution that shall *originate* as well as disseminate learning among men.

It must be the joint and earnest effort of the whole profession, or of the live and progressive portion of it, favored with pecuniary aid from without.

But, as a believer in "the healthy vital test," in the results of "direct and careful experimentation," in the "continued order of cause and effect," and "the eternal fitness of things," I shall not hesitate to vouch for the successful workings of such an institution, when properly organized and managed, and for the Materia Medica that it will furnish.

III. *Failure of Old Methods.*

In further advocacy of a college of drug provers, I must refer briefly to the latest and best effort in the formation of a Materia Medica, after the old and yet current methods of obtaining, noting, and publishing drug symptoms, as exhibited in the specimen number of Dr. Allen's Encyclopedia, giving the pathogenesis of Aconite.

That publication clearly demonstrates two important propositions, namely:

1. That the methods of obtaining and noting drug symptoms, now in vogue, are productive of no greater certainty and value in the Materia Medica than those of the earliest days of homœopathy: and,

2. That clinical experience as a means of verifying drug symptoms, and of eliminating the spurious, is a decided failure.

Dr. Allen, in his introduction, says: "The following symptomatology of Aconite has been compiled from the résumés of Hahnemann and the Austrian Society, both of which have been carefully retranslated and compared with Dr. Dudgeon's compilation in the Hahnemann Materia Medica, Part I; to these have been added all other provings that we have been able to discover, and also many valuable symptoms from cases of poisoning."

Not only all the old provings, made we know not how, and all the gatherings from toxicology and clinical practice, often of very doubtful character, have been swept together; but "to these have been added *all other provings*" that the author was able to discover.

Let us consider the meaning and scope of this language, that we may properly understand what is embraced in this symptomatology of Aconite. The author's ability to *discover provings* has been almost unlimited.

Familiar with the languages in which the journals of homœopathy are published, having a library embracing the whole literature of the new school, aided in his search by competent assistants, and even furnished with provings in manuscript form, that had never been published, he could certainly discover all that was in any way discoverable.

When, therefore, we are told, that he added "all other provings which he was *able to discover*," we must widen out the grasp of our conception, to take in provings of all kinds, symptoms of all grades, the genuine and the spurious, the characteristic and the common, the useful and the useless alike.

We behold in one grand conglomeration, symptoms experienced by physicians exposed to all kinds of weather, losing sleep, eating irregularly, harassed by professional cares, entering sick-rooms filled with the emanations of disease, and handling various medicines from hour to hour—symptoms experienced by editors and writers, worn by exhausting literary work and perplexed by cares peculiar to their calling—symptoms experienced by students of medicine, anxious to aid in a work to which they have been urged by the fathers, and upon which they have

entered with much greater zeal than exact knowledge and discretion—and symptoms furnished by enthusiastic lay friends of the profession, ignorant alike of anatomy, systematic or topographical, and of the phraseology peculiar to medicine.

The symptoms reported by all such, and many more, wherever published, or through whatever channel coming, have been received in good faith, as *the effects of Aconite on the human organism*, and placed in the Materia Medica, the great Bible of homœopathy.

A physician in active practice, also an editor and writer, taking a dose of Aconite, "sixtieth dilution," reports: "Disinclined to exert body or mind;" "Countenance pale and anxious;" "Warm feeling in stomach;" "Pulse small and weak;" "General muscular tremors," etc., and behold, these symptoms stand to-day in our Encyclopedia, as the undoubted effects of Aconite.

A prover—we know not if physician, student, or layman, male or female—taking the "fortieth dilution" of Aconite, reports, among other sensations: "Posterior part of brain feels very much injected;" "Food distressed after eating;" and, lo! these symptoms, with all their wonderful perspicuity and weight of meaning, stand among the effects of Aconite.

A physician, editor, author, at first an allopath, then a professed homœopath, and, finally, a *revert* to allopathy, taking some of the tincture of Aconite, how much we know not, reported: "Several times repeated sensations as if left upper lid was long, heavy, and hung down, as if paralyzed (though it looked natural),"—a symptom that one, knowing the Doctor, might suppose to be more indicative of a left-side and downward view of the medical situation, a sort of "squinting down the nose," than of any peculiar influence exerted by the monkshood.

The same prover further reported: "Sensation as if the whole body, from the shoulders downward, was heavy as lead, while a heavy pressure from all sides and from above downwards, seemed to render the whole body smaller in size and stature, the head and neck seeming to retain their natural proportions,"—a symptom, a shadow, it might seem, of coming events, in which the pressure of professional opinion from all sides lessened his per-

sonal proportions, causing him to appear smaller in "size and stature;" his head, however, still seeming to himself *large as ever.*

And both of these symptoms are displayed at full length in our Encyclopedia, as the effects of Aconite.

One might be led to suppose, from the prominence given to clinical experience as a means for the correction of drug pathogenesy by some of our writers, that seventy years of homœopathic practice should have pointed out a few, at least, of the spurious symptoms gathered into the Materia Medica, so as to warrant their rejection from new publications.

But clinical experience has thus far corrected nothing; nor has it led to the erasure of a single symptom from our recorded provings.

In his Introduction to the Pathogenesy of Aconite, Dr. Allen says: "All the symptoms given by Hahnemann are retained, though a few have been corrected, as indicated by Dr. Hughes in the *Monthly Homœopathic Review.* Some of Hahnemann's symptoms, derived from clinical cases or poisonings, have by some been considered unreliable; as, for example, most of Greeding's symptoms (Aconite No. 12). . . . . A few are, however, put in brackets, but *none omitted.*"

All the *correcting* has come, not from clinical experience, but from the scholarly researches of Dr. Hughes and Dr. Dudgeon among the dusty volumes whence Hahnemann gathered symptoms from cases of poisoning and from clinical records, which should never have been placed by him among the effects of Aconite at all. And the few symptoms which Dr. Allen has placed in brackets as doubtful, should have been omitted entirely.

It is a singular fact and one demanding attention, that anything published as a *drug proving*, by any one, in any journal or society transactions, however muddled in its expressions, however contradictory, or however nonsensical, has been looked upon with awe and childlike veneration, as no more open to criticism and discussion than the prayers of all people, however jumbled and meaningless, to those who listen, and who are expected to be edified and made better thereby.

An expression of honest doubt, or a smile of incredulity, from one reading the long-spun narrative of a simple-minded or of a

zealous and imaginative prover of some innocent stuff, called a drug, has in some quarters been regarded as extreme profanity and as characteristic of "our outsiders."

In justice to my friend Dr. Allen, who should receive the thanks and encouragement of the entire profession in the great and important work he has in hand, I should say that he simply proposes to collate all the provings of drugs now scattered through numerous works in various languages, placing them in convenient shape for reference, without himself putting them through any processes of sifting or purification. If these provings are faulty when he finds them, they will be faulty when he leaves them.

I am sure he will give us as good a Materia Medica as the old, superficial, and indiscriminate modes of obtaining and noting drug symptoms will allow, with much less "moonshine" and Pickwickian nonsense than might be looked for from some other and more pretentious sources.

In conclusion, whatever way we look, whether into the ponderous and yet growing volumes of Materia Medica, or the massive Repertories and multiplying works on Practice, which continually hash and rehash drug symptoms, as gathered from all quarters and garnered with little or no sifting, we must see and feel the urgent necessity of a thorough proving of all our remedies, in an institution such as I had the honor of advocating before this learned body at its last annual meeting.

In *no other way* can certainty be attained as to drug effects and drug capabilities. The question is now before the Institute: Shall we have a College of Drug Provers, or shall we not?

XLVII.

ON THE SIGNIFICANCE OF PRIMARY AND SECONDARY SYMPTOMS.

By E. M. Hale, M.D., Chicago, Ill.

Although no dogma was more clearly taught by Hahnemann than that drugs caused primary and secondary symptoms, it has been ignored or disputed by a large proportion of his adherents.

It is not the object of this paper to enter largely into the discussion of the subject, but to give a few examples which shall illustrate this double action of medicinal agents.

I hold that the common axiom that "one extreme follows another," is as true in respect of medicinal action as it is of all physical or psychical forces.

It is hardly necessary to present such trite examples familiar to all as "a chill is followed by abnormal heat," or "mental exhilaration by mental depression," or "intense cerebral excitement by severe cerebral exhaustion," etc.

I propose to present for examination the action on the human system of a class of agents which we will call "renal remedies," and of which *Cantharides* may be placed at the head as the typical drug. They are Cantharides, Cannabis Ind., Cannabis sat., Terebinth., Erigeron, Apis mel., Erechthites, Coccionella, Copaiva, Cubebæ, Pulsatilla, Senecio.

We know that all these medicines affect specifically the urinary organs; that they cause irritation and inflammation. But what is the order of their symptoms; or rather, the sequences of their effects? If we take as many healthy persons as there are remedies named, and give to each a dose which an allopath would

call "medicinal," but which I shall call "pathogenetic," namely, from one to ten drops of the tincture, three or four times a day, how will the record of the *general* symptoms run?

For a few days but little effect will be observed, except, perhaps, an increase of urinary secretion, which may appear to be warmer than usual. But soon it is observed that the secretion is growing scanty, it is unnaturally hot, the color heightens, and urination is more frequent. In a few days, more decided symptoms appear; the urine is very scanty; only a few drachms are emitted each time, or a few drops are expelled with much effort; it burns like fire, or scalds like boiling water, or severe cutting, lancinating pains accompany the act. The urine is bright red, it looks like blood, and often contains blood. As the irritation increases the urging to urinate is constant, the pain is constant, the nervous system becomes excited, delirium sometimes occurs and a fever sets in. Pain in the back, loins, perineum, bladder, and other contiguous parts point unmistakably to inflammation of the urinary and genital organs. Suppression of urine usually ends the scene (in cases of poisoning), and the brain is poisoned by the constituents of the urine mixing with the blood, and death often ensues.

If the patient recovers, it is generally through a severe ordeal of irritative fever, of longer or shorter duration, with the following symptoms and conditions, which we can certainly call *secondary*. It will not suffice for the exactitudes of modern science to call these effects "*the reactions* of the organism against the drug effects," as some have flippantly done. Granted that it is a *reaction*, it is a specific *reaction*, just as the primary effect of each was a specific *action*. The symptoms evolved are just as peculiar and characteristic in secondary as in primary action.

These secondary symptoms in *general* are (after the febrile symptoms have subsided) those which belong to that pathological condition known as *atony with irritability*.

If the case has been one of poisoning by large doses, paralytic symptoms set in, paralysis of the bladder and sphincter, with retention of urine.

If it has been a heroic or ordinary proving with material doses, we shall observe, with the subsidence of the inflammation,

an increase of the previously suppressed or scanty urine. The pain, instead of being acute and agonizing, is dull, wearing, or continuously burning. The emission is irregular, now scanty and high-colored, then profuse and watery. It often becomes very profuse, frequent, and colorless. Spasmodic conditions often alternate with the paralytic. As during the primary effects we found hemorrhage, mucous discharges, and epithelial desquamation, the result of *active* inflammation, so now we have the hemorrhage, but it is *passive*, abnormal discharges, but they are purulent, and desquamation, but it is of a different character. In fine, we have a condition wrongly named the "chronic inflammatory," during which ulceration, sloughing, and those diseases of the kidneys known as Bright's disease, worry the patient out of life.

If the objection is made that I am generalizing too much, I will say that I am obliged to generalize in order to give a bird's-eye view of the action of this class of medicines. Each of the drugs mentioned has a *special* action, which develops special symptoms, which differ from those of the other members of that class. In other words, while they are *similar*, they are not in any respect *identical*. And this is but another proof of the value of *secondary* symptoms. They are as often of value to us in the treatment of disease, and have to be as carefully differentiated as the primary.

While I do not wish to recapitulate, it will give a better understanding of the nature of both sets of symptoms, if they are presented in such a manner that we can compare them side by side, as in the following arrangement:

PRIMARY EFFECTS.	SECONDARY EFFECTS.
General Pathological States: Congestion; irritation; blennorrhœa; hemorrhage; spasm; all from an acute inflammation and irritation of the tissues, with primary hyperæsthesia.	*General Pathological States:* Passive congestion; passive blennorrhœa or hemorrhage; irritation and spasm from atony (with secondary hyperæsthesia); or anæsthesia with paralysis.
Urine: Scanty; hot; high-colored, with acute epithelial desquamation.	*Urine:* Profuse (or alternately scanty and profuse); clear, watery or turbid.
Sediment: Scanty; composed of epithelium; red blood; urates.	*Sediment:* pus; phosphates; black, disorganized blood; tube-casts, epithelium, etc.; rarely heat; the ten-

PRIMARY EFFECTS.	SECONDARY EFFECTS.
kidneys, bladder, and contiguous tissues.	derness, soreness, and pain less marked.
Discharges: Scanty; clear; tenacious; transparent or slightly opaline mucus; sometimes mixed or streaked with red blood; bland.	*Discharges:* Profuse; yellow; green; brown, with black blood; purulent; often excoriating; sanious.
Urination: Frequent and scanty; urgent, or with constant desire, but no emission; or only a few drops, with great pain.	*Urination:* Frequent and profuse; *retention*, from paralysis or spasm.
Suppression of urine from intense inflammation.	*Suppression*, from destruction of the secreting organs.
Involuntary urination, from vesical spasm.	*Involuntary urination*, from paralysis of sphincter.
Concomitants.	*Concomitants.*
Irritation; fever, with headache, delirium, or intoxication.	Hectic fever; stupor or coma from uræmic poisoning,
Satyriasis; nymphomania; seminal emissions (tonic); erysipelatous swellings; acute œdema.	Impotence; spermatorrhœa (atonic); chronic erysipelas; dropsy, or chronic œdema; petechiæ; vibices; psoriasis;
Urticaria; erythema, etc., with febrile action.	purpura, etc., with deficient vitality.

I have only given the general symptoms which are common to all this group. The special symptoms, if given, would occupy too much space. In a case of disease of the urinary apparatus, the first thing the practitioner has to do is to decide if the remedy will be found in this group. If so, are the pathological conditions and the symptoms similar to the *primary* or *secondary* effects of this group? If these questions are decided in the affirmative, then is the time to decide by an examination of the special symptoms, which particular medicine is the specific remedy. After the remedy is selected, another question must be answered, namely: What is the proper *dose?* This may not be considered as belonging to this subject. But as I view the matter, it is a necessary corollary of this subject; for the chief importance of a division of medicinal action into primary and secondary effects (symptoms) is, that such a division enables us to decide upon the quantity of medicine to be given in order to cure as surely and speedily as possible.

I have contended for this point for many years; and for nearly

fifteen years I have prescribed in accordance with the law of dose which is evolved out of this arrangement. The law referred to is, that

1. If the *primary* symptoms and pathological conditions in a case of disease are similar to the *primary* symptoms and pathological conditions belonging to the medicine selected, give that remedy in high or highest attenuations.

2. If the *secondary* effects of the medicine are similar to those of the disease, give the lowest attenuations.

I believe the time will come when it will be regretted that the symptoms recorded in the forthcoming Encyclopedia of Materia Medica have not been arranged into primary and secondary groups. I am aware that it may be impossible to thus arrange the symptoms of all important medicines; but this does not lessen the regret that it cannot be done.

XLVIII.

PROVINGS OF PHYSOSTIGMA VENENOSUM

(CALABAR BEAN).

PRESENTED BY TIMOTHY F. ALLEN, M.D., NEW YORK, N. Y.

PRELIMINARY OBSERVATIONS.

I HAVE the pleasure of presenting the provings of the Calabar bean, with a description of the plant, methods of preparation, and medical history. Over seventy provings have now been made, by over fifty individuals of different ages, sexes, and temperaments, with doses from twelve grains of the crude bean to the thirtieth centesimal trituration. We have here a large accumulation of general and minute observations, not one of which can we afford to lose.

A few remarks showing the key to its action will not be out of place. If a large dose be given to an animal, we perceive great uneasiness, copious evacuation of urine, great weakness and staggering, the fore legs jerk forward, the hind legs backward, frequent urging to stool, with passage of a few nodules, then more and more frequent and copious discharges, till they become fluid; the pupils contract, the head cannot be held up, the animal trembles, the respiration becomes labored and noisy, and death supervenes. Consciousness is retained to the last, and generally the rhythm of the heart's action.

The action of the drug is just the same upon men; the same tremors, convulsions, copious discharges, contracted pupils, with perfect consciousness.

In the muscular system generally, then, we find tremors, fib-

rillar twitchings, intermitting contractions, oscillating of the eye, continued peristaltic action of the intestines, until they are tied up as with strings into knots, continued contractions of the bladder, ending in rigidity, general tetanus, ending at last in paralysis. Locally applied, it destroys first sensation and then motion.

Let us now consider its most marked action on the eye. Applied to the lid it produces twitchings, heaviness, and immobility; applied to the conjunctiva it causes contraction of accommodation (myopia), then contraction of the pupil.

This contraction of the accommodation, though progressive, is spasmodic, as also is that of the pupil, as Von Graefe has shown.

Here is a key to the physiological explanation of the drug.

Contraction of the pupil may result from paralysis of the sympathetic, which supplies the radiating fibres, or from spinal depression (usually coincident with the last) (*Aconite*), or from irritation of the iris nerve-filaments, which *usually*, but not always, enter the eye with the third pair of nerves, or from cerebral irritation (communicated to the third pair), (*Opium*).

That the Physostigma lesion has to do with the third pair of nerves, together with the iris-filaments and accommodation nerves, is shown by the fact that though division of the sympathetic will contract the pupil, it will not affect the accommodation. Besides, when the iris contracts under this drug, we are apt to have twitchings of the lids or jerkings of the eyeball. Atropine dilates the pupil and relaxes the accommodation.

Physostigma exactly antagonizes Atropine, and temporarily contracts the pupil and the ciliary muscle. Daturine, from Stramonium, also dilates the pupil, and paralyzes the accommodation. Physostigma will overcome the relaxed accommodation of Daturine, but will not restore the pupil. The galvanic current applied to the sympathetic dilates the pupil.

Cicuta, Nicotine, and Hyoscyamus dilate the pupil by spinal irritation.

Bell., Æthusa, Stram., Hyosc., Verat., Alcohol, etc., dilate the pupil by cerebral depression or vascular engorgement.

Physostigma remains in marked contrast to all these drugs; and though allied to Nux vomica on the one hand and Opium on the other, is still quite distinct. *It is peripheral in its action.*

Let us examine its very interesting action on the heart and circulation.

It slows the heart's action in a very remarkable manner, without usually disturbing its rhythm. Some provings show a diminution of twenty beats; this is naturally accompanied by a coldness, feebleness, etc.

Its physiological explanation is here again found in its peripheral contraction of capillaries, which always slows the heart's action, just as more pressure added will slow an engine. It does not affect the cardiac ganglia. It does irritate the pneumogastric, as experiments on animals show. Its action here is spasmodic, however, and in some cases we find symptoms of irregular heart's action.

It stands alone among the drugs that affect the circulation, in that it leaves the heart intact till death. Dig. and Secale corn. produce powerful and persistent contraction of the capillaries (vaso-motor irritation), *especially Secale corn.;* but these also depress the cardiac ganglia, and render the pulse irregular (especially Digitalis). This want of rhythm always shows cardiac paresis following previous irritation.

In this respect Physostigma is in marked contrast to *Bell.*, *Saponine*, and *Aconite*, which paralyze the capillaries, especially Bell. (also the pneumogastric); while they all, with Coffea and Chloroform, depress the cardiac ganglia.

The action of Physostigma on the secretions is very marked and unmistakable, producing profuse secretions from glands (especially the lachrymal and salivary), from the intestinal canal and from the skin.

Glandular secretion is produced in two ways: By irritation of the gland-nerve proper (which is always a filament of a motor nerve); or by paralyzing the circulation, and allowing the blood to stagnate in the capillaries. Bell. paralyzes the gland-nerves, and produces dryness. Physostigma irritates them, and hence its profuse discharges.

Our provings show the peculiarities of the drug to be:

Some mental excitement and worry, bad dreams, etc., but easy exhaustion from mental work; dizzy head, so that one has to make an effort not to stagger, and especially a frontal head-

ache that is idiopathic; a feeling of tightness and constriction, often one-sided, wants to rub the head, generally relieved by eating; the skin seems tense across the forehead, and it is hard to close the eyes; the muscles of the neck become stiff; the carotids pulsate and throb at times.

The eye I have spoken of.

Several provers had a sore throat, with darting pains, but especially marked in the constriction of the throat and œsophagus, as though a big lump were there, or a piece of food had lodged there. This same sensation extends into the stomach. Dr. Fraser, of Edinburgh, described it as though he had hurriedly swallowed a chunk of food (undoubtedly due to the spasmodic muscular contractions). Hard pressure under the sternum; then griping pains in the bowels, especially along the transverse and descending colon; soreness and pains in left side from the splenic region downward (marked left-sided action in stomach as well as head, etc.); diarrhœa of soft mushy stools, not changed but softened by profuse admixture with intestinal secretions; profuse urine; twitching in muscles of trunk and limbs, and contraction of hamstrings; darting pains; tremblings; walking difficult; lassitude; benumbed sensation in limbs; cold extremities and paleness; general perspiration; *great dread of bathing;* relief after sleep and eating.

Coffee antidotes.

PHYSOSTIGMA.

PHYSOSTIGMA VENENOSUM. Balfour. (Trans. Royal Soc. Edin., xxii, p. 2.) *Natural order,* Leguminosæ. *Tribe,* Phaseolæ. (Nearly allied to Phaseolus and Mucuna.) *Common names,* Calabar bean, Ordeal bean. *Native names,* Chop nut, Esĕrĕ.

Preparation: Most of the provings have been made with *triturations of the whole nut.*

To make the Tincture: Digest one ounce of the powdered kernel in one ounce of alcohol, for forty-eight hours; pack in a percolator, and add alcohol till two ounces of golden-yellow

tincture are obtained. Five minims equal three grains of the kernel. If it is allowed to evaporate spontaneously three-fifths, one minim will equal one grain of the kernel.

To make the Extract: Digest one ounce of the kernel with twelve ounces of alcohol. Distil off eight ounces. Evaporate the rest over a vapor bath *to a syrup;* then allow spontaneous evaporation till twenty-one grains of extract are obtained.

To obtain the Alkaloid: Extract with *hot* alcohol, and proceed as is usual in such operations.

"The Ordeal Bean has been considered sufficiently peculiar to warrant the formation of a special genus for its reception. This has accordingly been done, the new genus receiving from Dr. Balfour the name of Physostigma, and the one species which it contains that of Venenosum. The most remarkable character of the genus Physostigma is that derived from the stigma, which possesses a singular crescent-shaped hooded appendage. By this character, and the long, grooved hilum of the seed, it is separated from the nearly allied genus Phaseolus; and from Mucuna, to which its seed bears considerable resemblance, by the character of its flowers and pod; from Canavalia, by its diadelphous stamens and other characters; and from Lablab, by its phaseoloid caniva and pistil. Physostigma venenosum, the Ordeal Bean, is a large climbing perennial, with a woody stem of two inches diameter, and sometimes fifty feet in length. Its large leaves are pinnately trifoliate, with ovate acuminate leaflets. Its papilionaceous flowers are in pendulous racemes, the stalk or rachis of which is covered with tuber-like knots. Each flower is about an inch in length, and of a pale-pink or purplish color, beautifully veined. The legume, when full-grown, is about seven inches in length, elliptico-oblong, with a short curved point, stipitate, dehiscent, and containing two or three seeds. The seeds, which are oblong or somewhat reniform, are from one to one inch and three-eighths in length, by about three-quarters of an inch in breadth, their convex edge marked by a long sulcate hilum, extending as a deep furrow from one extremity of the seed to beyond the other. The exterior of the seed is somewhat

rough, with a dull polish. Its color is a deep chocolate-brown, somewhat lighter on the raised edges of the furrow. The seeds weigh, on an average of twenty, sixty-seven grains. The Ordeal bean is difficult to obtain, even near the localities where it is produced. Dr. Christison states, upon the authority of the Rev. H. M. Waddell, of Old Calabar, that 'the plant is everywhere destroyed by order of the king, except when it is preserved for supplying the wants of justice, and that the only store of seeds is in the king's custody.'"

(Calabar is on the west coast of Africa, 4° to 8° N. Lat., and 6° to 12° E. Long.)

(The Physostigma is found in a region extending westward from the Niger River, among a tribe called the Eboe, Abo or Ibo.)

HISTORY.—The use of this bean by the natives as an ordeal for suspected criminals had been mentioned by missionaries, and especially by Dr. Daniell in an ethnological paper in the Ed. New Philos. Journal, 1846, p. 319.

In 1855 (Feb. 5th), Dr. Robert Christison read before the Royal Society of Edinburgh, a paper on the "properties of the ordeal bean of Old Calabar." This was printed in the Monthly Jour. of Med. for March, 1855, and also in the Pharm. Jour., 1855, p. 470, with figures of the bean.

In 1859, Rev. W. C. Thompson, of Old Calabar, obtained excellent specimens of the flowers, and sent them to Prof. Balfour, who, in January, 1860, read before the Royal Society of Edinburgh a description of the plant, which was published in the Transactions, illustrated by two plates (22, 305).

In 1863, Dr. T. R. Fraser presented, as an inaugural thesis, an investigation into the properties of this bean (discovering its remarkable property of producing contraction of the pupil), including experiments on himself and on animals. This was also published in the Edin. Med. Jour., vol. ix, 1863.

In the Lancet, i, 22, May 30th, 1863, Dr. Hart published the first account of its therapeutic application (in paralytic mydriasis).

Dr. Argyle Robertson published his observations concerning

the local actions on the eye, in the Edin. Med. Jour., v. iii, p. 815, March, 1863.

Since that date the most important papers upon its action and therapeutic application are:

Bowman and Wells, Experiments on the Eye. Med. Times and Gaz., May, 1863.

Ogle, Experiments on the Eye. Brit. Med. Jour., June, 1863.

Von Graefe, Experiments on the Eyes of nine healthy Persons. Deutsche Klin., 29 (1863).

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E. C. Beckwith, Trans. Hom. Med. Soc. of Ohio, 1870, proving.
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Provings from the Old School.

1. Christison, on himself, took 12 grains.
2. Fraser, four experiments, took 6 and 8 grains.
3. Robertson, chewed some of the bean.
4. A woman swallowed some pieces of the bean as large as a pea.
5. Dr. Young reported two cases of poisoning.
6. Sixty children poisoned in Liverpool.
7. Lingen, of St. Petersburg, reports a case of poisoning.
8. Toxicological effects observed in Old Calabar.
9. Robertson, effects when applied to the eye.
10. Bowman, effects when applied to the eye.
11. Von Graefe, effects when applied to the eye.
12. Dr. Todd (Indiana Jour. of Med.) took 200 drops of tincture.

Provings from Homœopathic School.

13. Dr. E. C. Beckwith, in Trans. of Hom. Med. Soc. of Ohio.
14. Dr. H. L. Chase, took 1st trit., in Trans. of Hom. Med. Soc. of Mass., vol. ii.
15. Dr. Charles Cullis, took 1st trit., in Trans. of Hom. Med. Soc. of Mass., vol. ii.
16. Mrs. S., took 1st trit., in Trans. of Hom. Med. Soc. of Mass., vol. ii.
17. Dr. C. Wesselhœft, took 3d trit., *a*, in Trans. of Hom. Med. Soc. of Mass., vol. ii.
    Dr. C. Wesselhœft, took 3d trit., *b*, in Trans. of Hom. Med. Soc. of Mass., vol. ii.
    Dr. C. Wesselhœft, took 1st trit., *c*, in Trans. of Hom. Med. Soc. of Mass., vol. ii.
18. Mrs. P., took 1st trit., in Trans. of Hom. Med. Soc. of Mass., vol. ii.
19. Miss H. C., took 1st trit., in Trans. of Hom. Med. Soc. of Mass., vol. ii.
20. Mrs. V., took 1st trit., in Trans. of Hom. Med. Soc. of Mass., vol. ii.
21. Dr. H. B. Clarke, took 1st trit., in Trans. of Hom. Med. Soc. of Mass., vol. ii.
22. A young man, took 1st trit., in Trans. of Hom. Med. Soc. of Mass., vol. ii.
23. A boy, took 1st trit., in Trans. of Hom. Med. Soc. of Mass., vol. ii.
24. Dr. Swan, proving 1^{m}, H. M., vol. ix.
25. Dr. William P. Wesselhœft, proving by a lady, 3d trit.
26. Dr. William E. Payne, *a*, with 30th trit.
    Dr. William E. Payne, *b*, a lady, with 30th trit.
    Dr. William E. Payne, *c*, a student, with trit. of bean.
    Dr. William E. Payne, *d*, a lady, with 3d trit.
27. Dr. Robert C. Smedley, 30th trit.
28. Dr. Lilienthal, 30th trit.
29. Dr. H. C. Houghton, 3d trit.
30. Miss Scott, 3d trit.

31. Dr. C. Hering, 3d trit.
32. Dr. C. Hering, from Dr. Berridge, crude bean.

Provings of the New York Homœopathic Medical College, 1873–4, *communicated by Prof. T. F. Allen.*

33. Stone, *a*, 1st trit.
    Stone, *b*, 2d trit.
34. G. W. Flagg, *a* and *b*, 30th trit.
35. C. E. Rowell, *a*, 30th.
    C. E. Rowell, *b*, 1st.
    C. E. Rowell, *c*, 1st dec.
36. E. J., 1st trit.
37. W. W. French, *a*, 30th.
    W. W. French, *b*, 3d.
38. G. S. Farmer, 30th trit.
39. P. N. Crosky, *a*, 30th.
    P. N. Crosky, *b*, 3d.
40. J. P. W., 30th.
41. Th. Foote, 30th.
42. J. M. Dart, *a* and *b*, 30th.
43. L. L. Brainard, 3d trit.
44. F. A. Gile, 30th trit.
45. J. W. R., *a* and *b*, 3d.

Provings of the Hahnemann Medical College of Chicago, communicated by Prof. T. S. Hoyne.

46. W. H. Titus, 3d trit.
47. A. P. McDonald, 30th.
48. W. H. Wilson, 30th.

Provings of Boston University School of Medicine, communicated by Prof. C. Wesselhœft.

49. Mrs. S. N. Nichols, 30th.
50. S. C. Collins, 3d.
51. A. L. Kennedy, 3d.
52. L. T. Hayward, 3d.
53. Dillingham, 3d.

Provings of New York Medical College for Women, communicated by Prof. Alfred K. Hills.

54. Female "A," 30th.
55. Female, A. E. Q., 30th.
56. Female, H. A. W., 30th.

In all about seventy-three provings by fifty-six individuals.

PHYSOSTIGMA.

BY DR. CHRISTISON.

Effects on himself. (*Pharm. Journ.*, 14, 474.)

A certain pleasant feeling of slight numbness in the limbs, like that which precedes the sleep caused by opium or morphine, and which I remarked when awake for a minute twice or thrice during the night. On getting up in the morning, I carefully chewed and swallowed twice as much, viz., the fourth of a seed, which originally weighed forty-eight grains. A slight giddiness, which occurred in fifteen minutes, was ascribed to the force of the imagination, and I proceeded to take a warm shower-bath; which process, with the subsequent scrubbing, might take up five or six minutes more. The giddiness was then very decided, and was attended with the peculiar indescribable torpidity over the whole frame which attends the action of Opium and Indian hemp in medicinal doses. Being now quite satisfied that I had got hold of a very energetic poison, I took immediate means of getting quit of it, by swallowing the shaving water I had just been using, by which the stomach was effectually emptied. Nevertheless, I presently became so giddy, weak, and faint, that I was glad to lay down supine in bed. The faintness continuing great, but without any uneasy feeling, I rung for my son, telling him distinctly my state, the cause, and my remedy—that I had no feeling of alarm, but that for his satisfaction he had better send for a medical friend. Dr. Simpson, who was the nearest, reached me in a few minutes, within forty minutes after I ate the seed, and found me very prostrate and pale, the heart and pulse extremely feeble and tumultuously irregular; my condition

altogether very like that induced by profuse flooding after delivery; but my mental faculties quite entire, and my only sensation that of extreme faintness, not, however, unpleasant. Dr. Simpson judged it right to proceed at once for Dr. Douglas Maclagan as a toxicological authority, and returned with him in a very few minutes. In his absence, feeling sick, I tried to raise myself on my elbow to vomit, but failed. I made a second more vigorous effort, but scarcely moved. At once it struck me—"This is not debility, but volition is inoperative." In a third effort, I was more nearly successful; and in the fourth, a resolute exercise of the will, I did succeed. But I could not vomit. The abdominal muscles acted too feebly; nor were they much aided by a voluntary effort to make them act. I then gave up the attempt, and fell back, comforting myself with the reflection that vomiting was unnecessary, as the stomach had been thoroughly cleared. At the same time the sickness ceased, and it never returned. There were now slight twitches across the pectoral muscles. I also felt a sluggishness of articulation, and to avoid any show of this, made a strong effort of the will to speak slowly and firmly, through fear of alarming my son, who was alone with me.

Dr. Maclagan, on his arrival, thought my state very like the effects of an overdose of Aconite. Like Dr. Simpson, he found the pulse and action of the heart very feeble, frequent, and most irregular; the countenance very pale, the prostration great, the mental faculties unimpaired, unless perhaps it might be that I felt no alarm where my friends saw some reason for it. I had, in fact, no uneasy feeling of any kind, no pain, no numbness, no prickling, not even any sense of suffering from the great faintness of the heart's action; and as for alarm, though conscious I had got more than I had counted on, I could also calculate, that if six grains had no effect, twelve could not be deadly, when the stomach had been so well cleared out. Presently my limbs became chill, with a vague feeling of discomfort. But warmth to the feet relieved this, and a sinapism over the whole abdomen was peculiarly grateful when it began to act. Soon afterwards the pulse improved in volume, but not in regularity. I was now able to turn in bed, and happening to get upon the left side,

my attention was, for the first time, directed to the extremely tumultuous action of the heart, which compelled me to turn again on the back, to escape the strange sensation. Two hours after the poison was swallowed I became drowsy, and slept for two hours more; but the mind was so active all the while, that I was not conscious of having been asleep. On waking, the tumultuous action of the heart continued. In an hour more, however, I took a cup of strong coffee; after which, I speedily felt an undefinable change within me, and on examining the condition of the heart, I found it had become perfectly and permanently regular. For the rest of the forenoon I felt too weak to care to leave my bed; and on getting up, after a tolerable dinner, I was so giddy as to be glad to betake myself to the sofa for the evening. Next morning, after a sound sleep, I was quite well.

Small Doses of Physostigma Venenosum on Man.

By Dr. Frazer.

I have taken small doses, varying from 6 to 10 grains, and have administered small doses of an alcoholic tincture to various individuals. From the data thus acquired, the effect of a small dose may be described as follows:

In about five minutes a peculiar feeling in the epigastrium immediately below the sternum. This is very slight at first, but gradually increases in intensity till it becomes almost painful.

Eructation takes place in a short time, and always occurs during an aggravation of this sensation. This continues at intervals for a considerable time, and is by and by complicated by a feeling of dyspnœa. Dizziness is soon after experienced, and in a little while a degree of powerlessness in the muscles of the extremities. If a somewhat larger dose be taken, as in Prof. Christison's experiment, twitches occur in the pectoral muscles, and the dizziness is much augmented.

I have also further experimented, and noted a dimness of vision, a supposed increase in the salivary secretion, or at least an accumulation of fluid in the mouth, and a marked, though slight, perspiration. At this stage attempts to walk or even to

move the limbs are difficult, and may be unsuccessful, while at the same time consciousness is perfectly retained.

These symptoms reach a certain climax, and then gradually decline, dizziness being generally the most persistent, and they almost entirely subside after a night's rest.

The heart's action in Dr. Christison's case was described as becoming irregular and tumultuous.

The same irregularity has been observed in some cases which have come under my notice, and in many the cardiac contractions have been found to diminish in number.

In one experiment, 8 grains of the powdered kernel in one and a half hours reduced the pulse 20 beats.

When the extract is applied to the eyeball, it immediately causes a copious secretion of tears, and in about five minutes a distinct contraction of the pupil, confined to the side of the application.

In about thirty minutes after the application, the pupil becomes a mere speck, but still retains a certain degree of mobility. It continues in this state for twelve or fourteen hours, but a greater or less degree of contraction of the pupil may continue for five or six days. A slight headache and dimness of vision, with myopia in the affected side, are almost always produced, but these only continue for one or two hours at the commencement.

When the extract is applied to the edges and outer surfaces of the eyelids, there is produced, in addition to the contracted pupil, a degree of immobility of the eyelids.

When either extract or tincture is applied to the skin, a local action is caused. In about half an hour a distinct diminution in the sensibility occurs, and the skin may be pricked, very little pain only being excited.

Dr. Mastoren, of Glasgow, relates a case of a woman who chewed and swallowed a piece, about the size of a green pea. A very few minutes thereafter she felt sickish, and *had the feeling as if a ball were coming up to the throat.* She went out on the street, and felt stupid and giddy as she walked along, with a sensation *of a great feebleness over the whole body, rendering progression a matter of difficulty.*

Experiment 1st, on Man.

I ate 6 grains of finely powdered kernel two hours after taking food.

The pulse had been examined at different times within the previous fifteen minutes, and was found to average 68 per minute.

In 6 minutes, pulse 74.

In 19 minutes, pulse 72, and a slight degree of peculiar sensation in epigastrium.

In 15 minutes, pulse 76.

In 20 minutes, pulse 75.

In 30 minutes, pulse 72.

In 35 minutes, pulse 69.

In 40 minutes, pulse 66. Epigastric sensation recurred.

In 45 minutes, pulse 68.

In 50 minutes, pulse 64. A slight degree of giddiness is experienced. The epigastric sensation much increased. It now resembles the somewhat painful sensation which is produced when large pieces of food are suddenly swallowed, and recurs at intervals.

It is at first slightly indicated by a sensation in the thorax, near the upper part of the sternum. This extends downwards, becoming more and more intense until it reaches the epigastrium, when it is almost painful, and eructations usually occur.

There is a distinct escape of gas, and this is followed by a reversal of the direction of the pain from the lower sternum to the throat, so that eructations occur at the middle of this sensation.

In 55 minutes, pulse 65, full and regular.

In 60 minutes, pulse 62, and rather feeble. Dimness of vision and dizziness.

In 65 minutes, pulse 62. Increase of head symptoms, with a little perspiration.

In 70 minutes, pulse 60, very small and wiry, but regular. Nausea.

In 75 minutes, pulse 62. Copious perspiration all over the

body. Unable to continue reading, especially because of the dizziness. Experienced slight difficulty in walking.

In 80 minutes, pulse 60, thready, and difficult to count.

In 85 minutes, pulse 60.

In 90 minutes, pulse 58. Respiration accompanied with a little difficulty, and with a slight degree of dyspnœa.

In 95 minutes, pulse 59, very feeble, with occasional intermissions.

In 100 minutes, pulse 56. Eructations without the epigastric sensations, considerable nausea, and dizziness.

In 105 minutes, pulse 56, thready and intermittent.

In 110 minutes, pulse 58. Great difficulty in walking. Respiration requires an effort.

In 2 hours, pulse 60.

In 2 hours 5 minutes, pulse 59.

In 2 hours 10 minutes, pulse 60, rather fuller.

In 2 hours 20 minutes, pulse 58. Felt sick, and lay down in bed. Was conscious of having remained awake for some time, in a dreamy state. Next morning, felt uncomfortable, had a bad appetite, and experienced a slight degree of dizziness during the day.

Experiment No. 2.

Three calculations of the pulse within 15 minutes gave an average of 74 per minute.

Chewed and swallowed 8 grains of the powdered kernel.

In 3 minutes pulse 76.

In 5 minutes pulse 70. Epigastric sensation accompanied with eructation occurred.

In 10 minutes pulse 72.

In 15 minutes pulse 66, with slight sensation in the epigastric region.

In 20 minutes pulse 66. Sensation in epigastric region more intense, and accompanied with eructation. A dumb-bell, previously used with ease, was found a great burden, and the arm was with difficulty extended with it.

A steady erect position was with difficulty retained while going through with this (dumb-bell) exercise.

In 30 minutes pulse 68, soft and compressible. Epigastric sensation recurs without eructations.

In 35 minutes pulse 62.

In 45 minutes pulse 64.

In 55 minutes pulse 58, and very feeble. Sensations in epigastric region occur in quick succession.

In 65 minutes pulse 60.

In 75 minutes pulse 57.

In 80 minutes pulse 54, soft and compressible, and with occasional intermissions.

In 95 minutes pulse 57. Dizziness.

In 2 hours pulse 63; rather stronger.

In 2 hours and 10 minutes pulse 58. Muscular weakness still experienced.

The pulse continued to range between 60 and 70 till 3 hours after the commencement of the experiment.

Experiment No. 3.

Ate 10 grains of powdered kernel.

In 3 minutes violent epigastric symptoms.

In 6 minutes eructations.

In 10 minutes muscular weakness.

No change in the frequency of the pulse till 20 minutes, when it began to diminish in frequency and strength. General lassitude and dizziness; had to stop reading. Pulse soon afterwards could not be counted. In walking down stairs, great dizziness and dimness of vision.

Progression and gait very unsteady; encountered the wall and handrail more than once on the way out.

Experiment No. 4.

Pulse averaged 70.

Drank 10 minims of tincture diluted with half a drachm of distilled water.

In 5 minutes pulse 76. Epigastric sensation perceived.

In 1 hour pulse 63; thready and feeble.

In 1½ hours pulse 54.

It continued between 52 and 60 for one hour longer.

In 4 hours pulse 68; strong and full.

Provings.

Robertson, immediately, on chewing, nausea and sinking feeling in the stomach.

Thick lathery saliva from whole buccal surface though drug at once swallowed.

(Accelerates heart's action to 160 beats.)—*Bowman.*

If Physostigma is applied to the lids it produces immobility of them. Applied to the skin it benumbs, and causes a pricking all over the spot.

A woman swallowed some pieces as big as a pea. She felt as if a ball were coming up to her throat; became stupid and dizzy on walking. Feebleness. General walking became difficult.

PHYSOSTIGMA VENENOSA.

BY DAVID YOUNG, *Editor Medical Journal*, 10, 192.

In the month of April, a few of the beans fell into the hands of a cabinetmaker, who supposed them peculiar kinds of "nuts." On the 13th of June, two or three of them fell into the hands of two boys, one aged 3, the other 6. At 7 o'clock the parents of the children saw them playing with the "nuts." In about 20 minutes after the boys disappeared, and in 20 minutes more they returned home, complaining of giddiness. The mother of one of the boys (aged 3) states that at 15 minutes before 8 the child entered the house, his head drooping listlessly, his eyes sleepy like, and his hands powerless. On entering the room he staggered and was scarcely able to walk. He complained of severe pain in the epigastric region, and begged that he might be laid upon the bed. His pupils were slightly contracted; his pulse feeble and slow, and he appeared to be perfectly prostrated. A small dose of ipecacuan wine was administered, and then some lukewarm water. He vomited freely, and four pieces of the nut were found in the vomited matter.

The other boy returned home at the same time. His father stated that "his eyes were working," or as his mother said, "as if

the nerves were upon him." He complained of severe pain in the umbilical region; he looked sleepy, listless, and depressed, and begged to be put to bed. In a few minutes copious vomiting ensued. He was so feeble as to be unable to completely eject the vomited matter, and a neighbor, on putting his finger in his mouth, removed four or five pieces of the "nut." He then requested to be taken to the *closet*, but he could neither stand nor walk. He was freely purged; his face was pale; eyes heavy; pupils and pulse natural. On the day following, the children complained of sickness and declined their food. On the third day they were quite well.

The older boy, when subsequently questioned, admitted that he had broken two of the nuts by means of a poker; that each nut was broken in about five pieces, and that James and he had swallowed the pieces of one nut without chewing them. When asked to select one about the size of the one they had eaten, he pointed to one an inch long, and half an inch in thickness, weighing 65 grains.

Sixty Children Poisoned by Calabar Beans.—They ate from two to four apiece, and one ate as many as twelve and yet recovered. The symptoms came on in from one-half to two and a half hours. They were very pale and cold, staggering on attempting to walk; quite prostrated; with extremely feeble pulse, and cold and clammy skin.

Vomiting commenced soon in most of the cases, and purging in a few of them. In about two-thirds of the cases the pupils were contracted, and there was double vision. A few complained of pain in the bowels, but not at first. They suffered greatly from thirst, and drank readily large quantities of warm water. In the worst cases there was great drowsiness, while others complained of giddiness. The appearances presented were as if the nervous system had received a great shock, amounting to complete collapse in the worse cases. Only one case proved fatal, a boy of 6 years, who ate six of the beans and did not vomit; he lived about two hours. All the organs were found healthy, even the brain and spinal cord.

A woman ate one of the beans; had staggering gait, double vision, nausea, feeble pulse, and pale face.

LINGEN (*Petersburg Med. Zeit.*, 6, 244, 1864).

A young man ate a whole bean; in one-quarter of an hour he complained of violent oppression in epigastric region, inclination to vomit, and attacks of faintness. After copious draughts of water and mechanical irritation, he produced vomiting with great retching, followed by collapse, with cold sweat in drops over the whole body; complete muscular relaxation, with continued fibrillar twitchings of the muscles. Pulse small and frequent; pupils not contracted; vision not affected; consciousness perfect.

In Calabar, those who took the Ordeal bean began in ten minutes to have thirst, which increased till they begged for water, then the power of swallowing was lost; mucus ran from the mouth; convulsions and twitchings (especially in the back); death in thirty minutes; consciousness all through; no delirium; power of speech retained long after inability to swallow. Should nausea or vomiting set in, they often recover.

Eye.

Robertson says: As the pupil contracts less light enters the eye, and hence the other pupil dilates.

The accommodation *recovers* before the pupil.

Applied to the eye (30 grains of the nut digested in alcohol and evaporated, the residue dissolved in 1 drachm of water; 1 minim of this equals 1 grain of the powdered bean),

— *in* 10 *minutes*, objects distant more than one foot seem dim and indistinct; all objects seemed nearer and larger; pupils unchanged.

— *in* 20 *minutes*, pupil contracted to 1 line in diameter (normal size, 2 lines). Objects distant more than 9 inches are dim; all objects seem one-half larger and nearer.

— *in* 30 *minutes*, pupil $\frac{2}{3}$ of a line (the other pupil $2\frac{1}{2}$ lines in diameter); no distinct vision beyond 8 inches.

— *in* 70 *minutes*, pupil $\frac{1}{2}$ line (other pupil normal). On reading, heaviness and fatigue of the eye; dull aching and heaviness on using the eyes; eyes feel strained.

In a subsequent experiment, concave 8 enabled him to see at a distance, but not nearer than 5 inches.

When Atropine was first dropped into the eye (using a solution 4 grains to the ounce), in 1½ hours the nearest point was, left 8 inches, right 12 inches; then Physostigma was used, and in ½ hour could only see distinctly between 6½ and 9 inches; after this Physostigma gradually predominated, and near vision became distinct.

NOTE.—Contraction of the pupil from lesion of the sympathetic does not affect the accommodation.

When the accommodation becomes affected by Physostigma, twitchings (spasmodic) of the lids ensue.

Daturine paralyzes accommodation and dilates the pupil like Atropine, but *Physostigma* introduced after Daturine restores the accommodation and produces strong myopia, while the pupil is still widely dilated.

Experiments made by Mr. Bowman on himself showed *astigmatism*, so that horizontal lines became indistinct, while vertical ones remained clear; this was neutralized by concave 14 cylindrical.

Syrupy extract applied to the eye caused instantly a copious discharge of tears; in 5 minutes the pupil began to contract; in 10 minutes pupil $\frac{1}{18}$ inch in diameter, vision imperfect, distinct vision impossible, slightly painful sensation in the supraorbital region; 30 minutes, the pupil a mere speck, vision nearly lost, with some redness and photophobia; in 4 hours dim vision disappeared, but the pupil remained contracted for 5 days.

Another application produced, in addition, marked immobility in the lids, with disagreeable sensation of dryness, and an *inversion of the upper lid on closing the eye.*

Græfe.—On carefully watching the progress of the myosis (contraction of the pupil), the iris is seen to contract convulsively with little jerks or twitches; they are very small and rapid jerks, and would easily escape observation.

While the iris was under the influence of Physostigma in all stages it was sensitive to light, that is, it would contract still

more from a sudden strong light, even when the myosis had reached a high grade. This seems to show that the sensibility of the retina remains unaffected.

The myosis lasts from 2 to 4 days.

After the *myosis* has passed off there is usually *mydriasis* of a slight degree for several days, especially during the morning hours; this seems to depend upon a kind of fatigue of the sphincter, which passes off during the day under the reflex stimulus of light.

Bright daylight seems like twilight, the result of the largely contracted field of vision.

The action on accommodation consists in the approximation of the far point (myopia), and also of the near point. This contraction does not usually progress steadily, but by spasms or jerks (just as the pupil contracts); the far point is approximated sooner than the near point.

If a very weak solution is used so that the accommodation is not markedly affected, we find that on attempting to use binocular vision, as in reading, a disturbance exists, consisting of pain, blurring, and straining, so that one eye must be closed, which is relieved by a weak concave glass; it seems as though the ordinary will, impulse, caused too great an action of the accommodation.

The phenomena of the accommodation lasts much shorter than does the myosis. The approximation of the near point lasts longer than that of the far point.

Visual acuteness often sinks to one-half the normal under its use.

Letters seem in constant motion, and can only be seen at a large visual angle.

One observer could bring his vision with perfect clearness to the normal, but only with very great and painful exertion.

The circulation in the fundus of the globe is not affected.

Toward the end of the myotic action there is experienced a painful tension, partly in the equator of the ball, partly in the ciliary region.

Nervous achings in the whole ball, which extend along the supraorbital nerves, and over half the head.

Græfe.—Experiment on a man without any iris: his vision was $\frac{1}{2}$, with the use of a positive cylindrical glass $\frac{1}{24}$ (hyperopic astigmatismus). Range of accommodation $\frac{1}{8}$.5.

At 2.58 minutes, instillation of *Physostigma* extract, followed by slight biting in the conjunctiva, which passed off in a minute.

At 3.7 minutes, myopia $\frac{1}{30}$; near point remains at $5\frac{1}{2}$ inches, though accommodation is reduced to $\frac{1}{8}$ $\frac{2}{4}$; from this time the myopia gradually increases, and soon a slight nearing of the near point begins, with no trace of pain.

At 3.20 minutes, myopia is $\frac{1}{10}$; near point 5 inches; accommodation only $\frac{1}{10}$; visual acuteness diminished to $\frac{2}{3}$. (Note.—This diminution of visual acuteness in this case is not dependent on contracted pupil, as had been supposed in other cases. T. F. A.)

At 3.30 minutes, myopia $\frac{1}{7}$ $\frac{1}{2}$; near point, $4\frac{3}{4}$ inches; accommodation only $\frac{1}{13}$; vision very indistinct at a distance on account of large dispersion circles.

3.42 minutes accommodation same; myopia begins to diminish.

3.45 minutes, accommodation $\frac{1}{9}$; myopia $\frac{1}{10}$; near point the same.

3.50 minutes, accommodation $\frac{1}{7}$; myopia $\frac{1}{18}$; near point a little farther.

4.12 minutes, accommodation $\frac{1}{6}$; myopia $\frac{1}{24}$; near point 5 inches.

4.50 minutes, accommodation $\frac{1}{8}$ $\frac{1}{2}$ (nearly normal); near point 5 inches; myopia only $\frac{1}{50}$.

The action on the ciliary muscle seems entirely independent of the presence of the iris.

CALABAR BEAN.

By Dr. Henry G. Todd (Indiana Journal of Med.), M. & S. Reporter, Phil., Jan., 1873, p. 534.

This being a potent agent, I did not feel at liberty to prescribe it till I had tested its relative dose by personal experience.

I commenced by taking 25 gtt. of the tincture every 15 or 20 minutes till I had taken 200 gtt. in $2\frac{1}{2}$ hours. This produced a very marked sensation of languor and indisposition to move, but by an effort of will my muscles were as fully under my control

as before. No contraction of pupil was discernible, and the pulse remained without change. This experiment was carried no further and was not repeated.

ESERINE (or PHYSOSTIGMINE).

Summary of physical action on animals. Dr. Lewi in Dresden. (N. Z. f. Hom. Kl., 1871, 33.)

Muscle tremors.

Tremulation, fibrillar twitchings, intermitting contraction of the limbs, trunk, and head.

Oscillatory motions of the pupil, alternate contraction and dilatation ending with contraction.

Oscillation of the eyeballs (nystagmus).

Trembling, spasmodic agitation of the heart.

Continual motion of the intestines, ending in circular contraction, knots.

Contractions of bladder, ending in rigidity of bladder.

Appearances of trembling motions, followed by or coincident with paresis.

PROVING OF PHYSOSTIGMA.*

BY H. L. CHASE, M.D.

The prover has dark complexion, dark hair, and bilious temperament. For the past two years he has used no animal food, except milk and butter; and is now perfectly well.

June 5th, 1865, 11 A.M. Took one grain, 1st trit. In fifteen minutes it was followed by a sensation of contraction of the eyelids, with difficulty of opening them, and a suffusion of tears when opened wide. In half an hour dizziness, and a sensation of wavering in the brain was felt in walking. Dryness and smarting of the tip of the tongue and lips continued all day.

June 6th, 9 A.M. Took one grain. The dryness and smarting of the tongue was the same as yesterday. At 10 A.M., there was a sensation of contraction of the whole left side of the face, with slight numbness. It required an effort to keep the left eye-

* Transactions Massachusetts State Medical Society, vol. ii.

lid open. This lasted till night, with occasionally severe pain in the right side of the upper jaw, like toothache, although the teeth on that side have all been extracted.

As a severe diarrhœa and other symptoms came on after great exposure and fatigue, the proving was suspended till June 12th, when at 4 P.M. he took three grains. Within fifteen minutes the same numbness and tingling, smarting of the tongue and lips, occurred, with a constant desire to moisten them. There was pain in the side of the jaw where there were teeth. The wavering in the brain was not so marked as before.

June 14th. At 11 A.M. he took two grains. The same symptoms of the tongue came on in twenty minutes. There was sensation of contraction in the *alæ nasi* and upper lip, with frequent desire to rub them, which relieved for the time. This lasted about twenty minutes. Then there was a deepseated pain in the forehead, with desire to rub it. There was dizziness in walking, and it required an effort of the will to keep from staggering. There was a sharp, darting pain in the right elbow-joint, extending down the outside of the arm to the two middle fingers. A numb pain was felt in the knees and ankles while sitting, with desire to move frequently.

June 15th. He took three grains at 6 A.M. After twenty minutes the tongue felt as if scalded. He felt severe, pressing pain in the forehead, as though something hard was bound tightly on it, accompanied by dizziness while walking. This lasted all the forenoon, gradually subsiding. Occasionally there was severe, sharp, darting pain in the right malar bone, and in the ramus of the jaw on the right side. The limbs felt weary, as after great fatigue, with a constant desire to move. It was difficult to concentrate thought. There was an itching of the left palm.

June 16th. He took no medicine. The scalding sensation of the tongue was all on the left side. He felt occasionally sharp pain in different parts of the body, head, limbs, knees, and elbows.

June 17th. He took three grains, with no other symptoms than the continuance of the scalding of the tongue.

June 18th. He took four grains at 10 P.M. The same sensation was felt in the tongue, but on the right side.

At 3 P.M., four grains more were taken. At 4 P.M., severe cramplike pain came on in the left popliteal space; walking was very painful. It lasted two hours, gradually passing off. During rest the pain ceased, but commenced again on motion; but by continued motion it was relieved.

June 19th and 20th. No medicine was taken. The scalding of tongue still continued, although the surface looked well. He has taken several doses since, but no additional symptoms have been developed.

PROVING BY CHARLES CULLIS, M.D.

First Proving.

June 29th, 1865, 10 P.M. He took two grains, first trituration. In five minutes he felt as if he had drunk a glass of liquor; the head was confused, there was vertigo, and the legs lost their strength. He staggered like a drunken man, and went to bed with his head swimming. He fell asleep, but woke repeatedly through the night, with terrible thoughts. He feared he was becoming crazy and that he might get up and do some mischief. He dreamed that he was a lion. At 4 o'clock he arose with a soreness, not a pain, in the left side of the abdomen, which was painful on pressure.

At 8 o'clock the next morning, his head felt clear; but the soreness in the bowels continued. It was painful when moving about, and was aggravated by riding. This soreness covered a spot as large as the palm of the hand, and continued five days. Then a small boil appeared on the inside of the right nostril.

It was very painful, the pain extending up to the eye and right side of the head. It broke on the fourth day, with but little discharge. On the tenth, after taking the dose, a severe headache over the right eye occurred, lasting two days.

Second Proving.—Female.

Mrs. S——, aged 30; temperament nervous, health good.

July 5th, 1865. At 10.20 A.M., took one grain, first trituration. In half an hour she felt a strange indescribable sensation throughout the system. After dinner there came on a heavy

pain in the back, under the left shoulder, which, after continuing severe for an hour, slowly passed away. At night a strange dizziness was perceptible. She held to the bedstead to keep from falling, and made an effort to shake off the feeling. The next day her whole frame seemed lessened and powerless. Her thoughts wandered, and she had difficulty in fixing her attention. A strange indescribable feeling continued several days.

Proving by C. Wesselhœft, M.D.

First Proving, Third Trituration.

The prover is 31 years old, of light complexion, with blue eyes, straight, dark hair; rather broad and muscular; of very phlegmatic disposition, but disposed to become excited. He inherits a disposition to headache from both parents, which manifests itself after irregularities of diet, etc. His health has been perfectly good for several years past.

June 9th, 1865. He took one grain third trituration at half-past 8 A.M. At 9 there was a feeling of constriction around the forehead and temples, changing into oppressive pain over the left orbit, and extending to the forehead and temples; very troublesome in reading. Sharp twinges in the right instep, and various twinging pains about the body, after half an hour. Slept well all night. While travelling in the cars the next day he had an attack of the customary headache, which lasted from noon till late at night; pain and throbbing in the forehead, worse on moving; *irresistible desire to sleep; soporific sleep*, extremely distressing; paleness of face. The sleepiness he never had before. The face was pale, and the attack was unusually severe.

June 11th. At 7 A.M. he took one grain of the third trituration. He felt drowsiness and desire to sleep all the forenoon, even while driving. After dinner the drowsiness, instead of passing off by exercise, increased, and for two hours he slept soundly, without dreams, in an uncomfortable position. He could arouse himself only with great effort; the sleepiness continued for an hour, even while walking in clear, cool air and bright sunlight.

About 8 P.M., while sitting still, he felt a pulsation through the whole body, particularly in the chest. Each beat of the heart was distinctly perceptible in the chest and temples. (The same symptoms had occurred at other times.)

At 10 P.M. he took one grain, and slept well all night. (This is never the case after having even a short nap in the afternoon.) He awoke at 6 A.M., and felt bright for two hours, when he became sleepy again while driving, with dull pressure encircling the head; dull weight along the vertex, mostly on the left lobe of the brain. After a light dinner, sleepiness became irresistible, and he slept some time.

June 12th, 3 P.M., he took another grain; went to bed *early*, and slept well; drowsiness all the next day, until after two hours' work in the garden, causing profuse perspiration, which expelled the drowsiness in part; but he felt it slightly next day.

Second Proving, Third Trituration.

June 19th, 10 A.M. Feeling perfectly well, except a slight sore throat (from sudden change in temperature on June 17th and 18th), he took one grain.

At 10 P.M. he took another, and yet another the next morning at 9, with no perceptible effect. Three days later a severe headache occurred after drinking freely of new milk, which generally agreed with him. The effects of the third trituration seems to have become exhausted.

Third Proving, First Trituration.

June 25th. He took one grain of first trituration at 10 A.M., and continued to take a dose night and morning until June 28th.

After taking the medicine in the morning, fasting, there was a feeling of constriction around the entire top of the head, as if a tight cap were being pressed down as far as the temples. At the same time there was a severe pressure along the sagittal suture, as if from fulness in the longitudinal sinus, and dull aching in each temple. Similar effects appeared each night and morning, about 15 minutes after taking the medicine.

He felt sleepiness while riding for two mornings; did not feel

the usual flow of spirits, and was obliged to make an extra effort in speaking with people.

After dinner he felt great drowsiness, which was very difficult to shake off. His desire for sleep was uncontrollable. He would fall asleep so quickly that he was surprised, on waking up, that he had slept.

A few hours of hard exercise would remove the drowsiness. He slept just as well at night as if he had not slept in the afternoon.

He felt a pressing from within outwards, in vertex and temples, which continued for five hours after taking the last dose. The symptoms disappeared the next day.

Fourth Proving, First Trituration.

Mrs. P., 49 years old. The catamenia for two years have been irregular and very profuse. She is of fair complexion; rather fleshy; lively; active in temperament; suffers from irritability of the eyes, which makes reading and sewing difficult. She often has black spots floating before the eyes, *muscæ volitantes*. For some years periodical rheumatic affection of the right knee has appeared with slight swelling; otherwise perfectly well.

The following is her report:

June 16th, 1865. I took one grain at bedtime. At 3 A.M. I had ten or twelve sharp darts of pain through my right thumb, at the root of the nail, and several weaker ones through the finger-joints of the right hand. The rest of the night I felt a dragging pain over the left hip, towards the back. I slept, but was conscious of dull pain. In the morning I awoke free from pain; eyes unusually free from black spots, and the knee was better. I took the medicine again at 11 o'clock A.M. At 11.30 I felt the customary stitches in the left side. At 2 P.M. there was a dull, heavy pain over the left hip, and extending to the back. This continued through the afternoon and evening, with bearing down, strongly indicative of the return of the courses. I took a third powder at bedtime. The pain diminished gradually in the night, and I slept soundly.

June 18th. I took a fourth powder in the morning. At 11

o'clock there were slight stitches in the left side of the abdomen; the knees and eyes were remarkably well. In the afternoon I took a fifth powder. For three or four days I felt irrepressible drowsiness, especially from early morning till 2 P.M.; this continued for a week.

June 30th. The drowsiness was diminishing. Dull pain and downward pressure in the back ensued, accompanied by the appearance of the menses.

Fifth Proving, First Trituration.

Miss H. C. is about 42 years of age; well-formed; of full habit, and excitable temperament. She suffered from suppression of menses fifteen years ago, and was relieved after homœopathic treatment. In the past year she had her menses only twice; otherwise her health is good. Of late years she is a very heavy sleeper.

She reports as follows:

July 3d. I took the first powder [one grain] at 10 P.M. Perceived nothing unusual, except slight momentary pains in various parts of the body, as twinging pain in the fingers of the left hand, a few minutes after the medicine was taken. Later I had a short attack of vomiting and diarrhœa. In the evening I was not drowsy as usual, but wakeful.

July 4th. At 5 A.M. I took a second powder, with no perceptible effects during the day.

July 6th, 10 A.M. I took a third powder. I had slight twinging pains in the lower limbs.

July 7th, 5 A.M. Took fourth powder, with the same consequences; particularly sharp momentary twinges in the ankle. A former pain in right hypogastric region, which had now been absent for two years, returned more troublesome than it usually had been.

July 8th, 9 P.M. Took fifth powder, with no perceptible effects.

July 9th, 5 A.M. Was followed by slight pains in the limbs.

July 10th. There was a feeling as if the menses were to set in, but the sensation passed off without further result.

Sixth Proving, First Trituration.

Mrs. N., 40 years of age. She has six children, all living; she is always well; her hair dark and straight; her eyes grayish-blue; she is active in temperament; rather fleshy; her menstruation continues perfectly regular.

She reports as follows:

Six hours after taking the first powder [one grain] I felt drawing rheumatic pains through the left shoulder. After the third powder, on the second morning, there was a very unusual feeling,—a drawing pain low in the back and abdomen, with bearing down, as if the menses were coming, although it was a week before the time; but, after four hours, it all passed off. The menses came at the right time, painless, and without the usual unpleasant premonitory symptoms. During the whole time of proving she felt heavy and dull in the head.

PROVING BY HENRY B. CLARKE, M.D.

First Trituration.

Age 38; complexion light; constitution delicate; temperament nervous; health good; actively engaged in general practice of medicine.

June 20th, 1865. At half-past 8 o'clock P.M. he took one grain; he felt a sense of distension, with soreness of abdomen, next morning.

June 21st. Took one grain of the same at 7 o'clock A.M. (before breakfast); after fifteen minutes a feeling of weakness, as though paralyzed, passed downwards from the occiput through the back to the lower extremities; the feeling in the legs was like that known as being "asleep." During the forepart of the day (which was sultry) he had at times a feeling of weakness, though there was *uncommon mental activity.*

June 22d. Took three grains at 7.30 (before breakfast); in fifteen minutes there was a feeling in the legs like that of yesterday, but the sensation was less perceptible in the back. In the evening colicky pains low down in the abdomen were succeeded

by a copious loose discharge from the bowels. A few similar pains were felt subsequently.

July 3d. Took five grains at 10 A.M. After exposure to hot sun he had headache, to which he is always liable under similar circumstances.

July 11th. Took ten grains at 12.30 P.M., and dined at one. No symptoms followed.

July 13th. Took three grains at 8 A.M., and breakfasted at eleven. Immediately after he felt a sense of weakness extending from the head downwards through the back and legs, attended in the legs by the thrilling sensation heretofore described; slight exertion caused lameness and weakness in small of the back. No other symptoms appeared which seemed to be caused by the drug, and he had some doubts whether the disturbance of the bowels was attributable to it.

(A trial of the medicine, in doses of one to three grains, was made upon Mrs. C., aged 29, with dark hair; healthy, but of delicate constitution, and quiet, unexcitable in temperament. There were no decided symptoms.)

A trial was made upon a young man of 17, with dark hair and blue eyes; strong, healthy, and of well-balanced temperament.

July 11th, 1865. He took one grain at 12.30 P.M. In the evening he felt chilly.

July 13th. Without repetition of medicine, at about 10.30 A.M., he had a sudden attack of headache, with nausea and bitter rising, followed by dull pain under the sternum. It was increased by suddenly turning the head, bending forward, or throwing the shoulders forward. On auscultation heart's action was found to be retarded, with diminished impulse; rate 56. There was no abnormal sounds, but the radial pulse was very irregular and weak. He thinks the symptoms may have come from a strain he had about a month ago, in lifting a heavy weight, as he had a similar feeling at the time. He lifted moderately the same day he took the medicine (11th), but was unaware of any strain at that time. His appetite is good, and with the exception of symptoms described feels well.

July 16th. For the last three days he has had attacks of par-

tial blindness; on attempting to write he was unable to see the line; he had headache, with fulness and a sense of faintness, with numb feeling down the left arm; pulse 50 to 60, with feeble impulse. There has been no pain in the chest for the last two days; he is costive, and has had no stool for four days. Upon subsequent exhibition of the drug the symptoms were not reproduced, and may be considered very doubtful.

A trial was made upon two boys. One aged 6½ years; he has light eyes and hair; is delicate, and of a nervous temperament, but quiet in disposition. On him it produced no apparent symptoms. The other is 5½ years old, also with light hair and eyes; strong and healthy, but of a highly excitable, nervous temperament.

June 21st, 1865. They took each one grain at 12.30 P.M. (before dinner).

June 23d. There was noticed in the younger, while he was sleeping, an unusual pulsation of carotid arteries. Upon examination the action of the heart was found to be irregular. In the morning his breath was offensive; and the whole group of symptoms may have arisen from disturbance of the digestive organs.

PROVING SENT BY WILLIAM P. WESSELHŒFT, M.D.

BOSTON, December 7th, 1874.

DEAR DOCTOR: The lady who made the Calabar proving was 35 years of age; dark, slender, of a very sensitive temperament, with a mind of much refinement and discriminating power. At the time of making the proving her health appeared perfect, and has been good since (several years); though she had a hemorrhage from the lungs a few years before taking the Calabar. She took one dose of the 3d centesimal; did not know what she was using. She wrote three reports. (In the first, symptoms were given as felt in the several parts of the body.) This I disapproved, requesting her to describe them in order of their appearance, which is given in Proving No. 2. No. 3, you will observe, has sensations, etc., which appeared or reappeared after the first symptoms had ceased awhile.

Yours truly,

WILLIAM P. WESSELHŒFT, M.D.

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No. 2.

This medicine was first taken on Monday, May 29th, 11 A.M., a cool day, quite cloudy and windy toward night.

Almost instantly I felt a shuddering and trembling run down through all the nerves of the body. The sensations appeared to begin in the head, and run down through the pit of the stomach, where they were strongest of all, and through the womb and all the body.

The chief sensation in the head was the one in the middle of the forehead, between the eyes, above and over, and in the left eye a pain, with muscæ volitantes. These symptoms were in the left eye only, and the medicine seems to me to act more on one side than on the other. The severest pain in the left side, and entirely unlike any pain *in* the lungs that I have for . . . . . had.

The chief action of this medicine seems to me to be in the nerves; all the other symptoms have been entirely accessory and secondary. And it seems to me, so far as I can judge, to have a very curious double-action on the nervous system. The nerves in front of the body (which I believe are the ? voluntary nerves, or ? nerves of motion), it appears to excite to *in*voluntary motion, causing tremblings, and going up and down in wavelike motion, all down through. But the nerves in the back of the body (the ? passive nerves or nerves of ? sensation), it seems to paralyze and numb, and during this numbing process it causes a good deal of pain, very similar to a pain in a tooth when its nerve is dying or being killed.

In the first action of the medicine, all the symptoms I wrote on the former paper (No. 1) run through two days, with one exception, that of the soreness in the tongue and difficulty of moving it.

The medicine has began a second round or course, which has been much *longer*. The sensations in the head were the same, but much more prolonged. They began on Wednesday evening, a hot evening. In addition to those described in the first paper, I felt a dizziness in the head at 3 o'clock in the night. All Thursday forenoon I was engaged in packing a camphor-chest. I was in the midst of crude camphor, which suspended the symptoms

entirely for the time; but very soon afterwards, in less than an hour, they returned, the same pain in the forehead and eye being quite strong. I have never found that camphor will stop the action of a medicine, but only suspend it temporarily.

At 3 o'clock on Thursday afternoon (a hot day) the tongue became very sore on the left side of it, quite back to the root, and it was very hard to move it, as if it was stiff. This lasted until the next afternoon. At 12 o'clock on Friday the trembling of the nerves at the pit of the stomach came again, accompanied with slight nausea and a sensation of faintness. In the afternoon a peculiar pain across the back of neck, I should say at the base of the brain, as if it were cutting off the body from the head. It went right through the neck, and seemed to go to the back part of throat, which was sore and stiff,—a feeling of loss of power and sensation *in* the back of head,—as if the head would fall over forwards, and the natural supports of the head would no longer hold it back. This was followed on Friday afternoon by pains all down the back of the neck, especially in the most prominent bone there, and on each side of it, *drawing* whenever the head was turned.

A sensation exactly as if the nose was going to bleed, and the peculiar taste which goes with it. This came at 2, and again at 8 P.M., on Friday. Between 8 and 9 P.M., a creeping numbness over the back of the head, and all down the spine, especially in the part between the hips. The pain through the temples and the burning of the eyes again. I had every symptom the second time (besides new ones), and they came so often that it would be only a repetition to report them every time. They all were more decided, distinct, and prolonged than the first time, and the medicine seemed to act more searchingly than in the first round, although the dose had not been repeated.

Friday was a warm day and windy. Saturday was a cool day. I had the symptoms in the eye all the morning, with much burning of the balls. Sneezing; pains in the womb as if menses were coming on. At 7 P.M., a numbness in the left arm and down the ring finger. At 8 P.M., involuntary twitching of the mouth, also of the *eyebrows*, and beating or throbbing and twitching *between* the eyebrows, also numbness from between the

eyes, down through the nose. This night once or twice before, I had intense sleepiness, which I thought came from the medicine.

Sunday was an intensely hot day. The only *new* symptom on this day was a numbness of the left hand as if asleep.

Monday was a cool day, and cloudy; east wind. At 1 P.M., the pains in the back between the shoulders and a little lower down.

I do not think the weather makes much difference, for the first day I had the pains in the back was a very hot day, and this was a cool day. Also this day, which was particularly cool and invigorating, was the day on which I felt the symptoms of weakness more than any other day. Since taking the medicine I have had a great deal of weakness and torpor.

At 4 P.M., leucorrhœa and much weakness. At 6½ P.M., pain in back between the hips, and a slight feeling of numbness in the region of the womb.

A sensation as of a drawing of cords behind the leg and the knee, making it hard to walk, especially upstairs.

A feeling as if all the power were going out of my limbs (legs), and they would give way under me, and I could not walk across the room; as if the cause of the weakness came from that, the spot in the back between the hips, and took away all power below that spot from the limbs.

Complete relaxation of the whole body, as if every nerve were unstrung, even to the eyes, which felt as if all power to see were going out of them.

Yet just before all these latter symptoms came on, just before 6.30 P.M., I felt a sudden access of vigor, and felt particularly strong, and all these symptoms seemed to come like a reaction.

Tuesday (7th day after the medicine), a cool day, I felt the nervousness at the pit of the stomach *in front* of the body most.

Inclination to stretch out the neck, "to run the head out," from uneasy sensations in the back of the neck.

Constant desire to move the head from side to side.

A great deal of leucorrhœa.

No. 3.

Wednesday, June 7th. Hot day.

9 A.M. Pain in lower limbs.

2 P.M. *Heavy* headache and pain in eyes, with much heat in head and face.

Muscæ volitantes, both black and light.

June 8th, 8 A.M. Pain in limbs.

Burning of eyes, and bloodshot appearance of them all the forenoon.

1.30 P.M. Slight nausea; this nausea does not seem to have any reference to eating, as it sometimes has come before and sometimes after eating.

June 9th. Hot day.

Congestive headache all the forenoon.

4 P.M. Pain through the temples, as from pressure of blood to the head, with throbbing of the arteries on the side of neck.

June 10th. Hot day.

Pain on the outside of knee.

Cramp in the left foot in the evening, while in a warm bath.

June 11th. Cool day.

Slight nausea, 10 A.M.

Pain in the left thigh, and in both knees after walking only a few steps, about noon.

Tired feeling in arms, and difficulty in lifting them.

Disinclination to move.

I think the medicine hinders voluntary motion as well as causes involuntary motion.

I have noticed that both days I felt the weakness have been particularly cool and bracing.

1 P.M. Dizziness, with faintness and muscæ volitantes on moving. Had these latter (muscæ volitantes) very much to-day.

3 P.M. Nervous motions go not only down through the body, but through the arms, and it seems as if a little stronger dose would make the arms move. This time the motions were accompanied with violent palpitation of the heart.

6 P.M. Soreness around the body at the waist.

June 12th. Cool day. Two weeks to-day since the powder was taken.

Same nervous symptoms, with palpitation of the heart, and much weakness at the pit of the stomach.

June 13th. Cool day.

2 P.M. Pain in the back came on again; also down the arms, with weakness of the same.

Twitchings in the nose, and involuntary expansion of the nostrils.

4 P.M. Numbness of the temples, and crawling sensation over the head.

I am usually not a heavy sleeper, but was intensely sleepy in the morning; almost impossible to get myself up, as if drugged.

June 14th. Cool day.

Great pressure on the eyes, with muscæ volitantes.

The medicine affects the sight very much, producing these spectres constantly flitting before the sight; long snakes or worms, both dark and light; also waves before the eyes, making objects have a tremulous motion, as if it gave the same quality of involuntary motion to the optic nerve that it does to the motor nerves, and made the sight movable; also a slight sensation of double sight, as if the images of objects would be multiplied.

Pressure in temples.

Trembling of legs, as if you could not walk straight. All this at 7.30 A.M.

At 9.30 A.M., seized with violent tremblings all over, in the street.

Felt for an instant as if I should lose consciousness, and could hardly get home; riding in a car for twenty minutes did not relieve the sensations.

These trembling spells come on in fits, and at the least thing that startles.

10.30 A.M. Trembling of hands, so that I could hardly sew. This spell lasted an hour, when the soreness at the pit of the stomach came on.

This is just the way and order in which the symptoms took place at the working of the medicine in the first two days.

3 P.M. Sense of emptiness and weakness at stomach without hunger.

Less appetite since taking the medicine.

June 16th, 1 P.M. Stiffness and pain going all down the spine. With these pains in the back there is an inclination to bend forward, as if hard to sit up straight.

4 P.M. Burning heat in the nose, and sensation as if it would bleed.

Quivering sensation in the teeth, as if they were resting on a sounding-board of a piano.

Action or position have nothing to do with the pains.

PROVING OF PHYSOSTIGMA.

BY WILLIAM E. PAYNE, M.D.,

(Member of the Bureau of Materia Medica of the American Institute of Homœopathy.)

Prover, aged 58 years; of nervo-bilious temperament; habits, active.

February 12th, 1874, 7 o'clock A.M. Took ten grains of the thirtieth centesimal trituration, dissolved in a tablespoonful of water.

12 M. Great sense of fatigue (general) as from long-continued labor, with fulness in forehead and tendency to ache, mostly right side. Face hot, flushed, and suffused, together with a feeling as if a change into a lower temperature would produce a chill. Appetite not as good as usual, with occasional nausea. The above symptoms continued without much, if any, variations throughout the afternoon.

8 P.M. Shooting pains in left iliac region; a few thrusts with an aching sensation down the thigh of the same side. Head continues to ache; a dull, heavy ache in the forehead, more in right side.

9 P.M. A feeling as if a hard body were lying in the stomach, like undigested food. Nasal passages feel as if a fresh cold was coming on; smarting and tingling in the nose, and several times sneezing. Aching in the joints of wrists and hands, also in the knees. Had a comfortable night, without interruption, and felt well the following morning.

February 13th, 7.45. Took twenty grains of the thirtieth trituration, dissolved in water, as before, and breakfasted an hour later.

9 o'clock A.M. A breathless sensation at the pit of the stomach, with a hard feeling as of undigested food; a disposition to make deep inspirations. These sensations were momentary, coming

and going. Deepseated pain in the head all day, aggravated by making a heavy or misstep, as if the brain were bruised. Fierce pains in lower jaw, right side. Passed the night without any unusual sensations.

February 14th, 8 o'clock A.M. Took twenty grains, dissolved in water as before. An hour later, the same breathless feeling returned, together with the sensation at the pit of the stomach as if undigested food oppressed it. An undefinable pain in the right side of the head, with a feeling as if it would increase; nevertheless, it did not, but continued the same throughout the day.

The above symptoms passed away, and no more medicine was taken till the 17th, when, at 7.30 A.M., twenty grains more, dissolved in water, were taken.

11.30 A.M. A dull, heavy, bruise-like pain in the whole brain, but rather more severe in the left temple, with a sensation of general fatigue. This continued throughout the day till evening, together with a general sensitiveness to cold, or change of temperature.

6 P.M. A constrictive pain suddenly seized the left arm, extending around, just above the elbow. An hour later (7 o'clock), a similar pain (constrictive) was felt around the leg of the same side, just above the ankle. These constrictive pains were momentary.

7.30 P.M. Shooting pain under the left knee, near or in the popliteal space, returning again and again. The constrictive pain just above the ankle of the left side was not continuous, but intermittent. On the following day the symptoms had greatly abated, though lingering still of the same character.

On the morning of February 26th, at 2.30 o'clock, was awakened by a pressive pain in the epigastrium, just under the ensiform cartilage, extending up into the chest and down the arms. Pain in epigastrium appeared to be produced by hard pressure against the lower end of the sternum, and extended all along the lower edge of the ribs, at the attachment of the diaphragm, and through to the back to about the third dorsal vertebra; the sensation was as if the pain was squeezed out into the anus. The pain seemed to alternate between an ache and an acute, quick pain, but was occasionally pulsative. Yawning and sigh-

ing respiration; great restlessness; intense suffering, producing perspiration on forehead; acceleration of pulse (96), usually about 74. Headache in the right temple, at first a heavy, dull pain; afterwards it became pulsative, and occasionally darting and quivering, like the motions of electric fluid passing from cloud to cloud, or from the cloud to the earth. Bowels excessively constipated—(a very unusual condition with the prover). A good deal of tasteless eructation, without relief. During the pain, sensitiveness over the region of the stomach to pressure; during the pain, frequent and excessive flow of pale and odorless urine. Very restless, moving from side to side, throwing the arms about the head, but no position seemed to afford relief.

Falling asleep frequently, but always awoke suddenly without relief. The following night scarcely closed the eyes in sleep. Thoughts very active; an idea started kept on with unusual persistence.

The symptoms continued without abatement for about sixteen hours, notwithstanding several remedies had been tried. At length the fact that the pain seemed to be produced by hard pressure on the lower end of the sternum, led to the selection of *Arnica* 30*th*, which afforded prompt and decided relief.

P. S. I offer the above symptoms for further consideration. Their severity led me to doubt whether they were the effect of the drug; and I would hold them subject to confirmation by other provings.

The following symptoms were obtained by a lady, married, aged about 35 years, who took ten grains of the thirtieth trituration. The severity of the pains frightened her, and she declined to continue the proving.

Sharp pains, first in left side of the head, then in the right side. Sharp pain, first in left arm, then in the right, involving the shoulders of either side. On the following day she felt a hard pain in the stomach.

Galen Allen, a student of medicine, of rather sedentary habits, a graduate of Dartmouth College, and a man of clear head, being in good health, took twenty grains of triturated Physostigma, March 11th, 1874, in the morning at 7.30, in water.

7.45 A.M. Sensation as of a rush of blood to the frontal and temporal regions.

8.30 A.M. Slight nausea; weight in the stomach, as from undigested food; giddiness; sensation as if the brain were loose and rolling about in the skull.

9 A.M. Pulse variable, full and strong; heavy pain in frontal region, worse from motion.

10.30 A.M. Burning sensation in the stomach, with hot eructations; slight nausea continues.

11.30 A.M. Darting pains in epigastric region.

12 M. Griping pain in the pit of the stomach.

1 P.M. Griping pain in pit of stomach and nausea continue; giddiness.

2 P.M. Darting pains in the head; stomach still disturbed, and nausea.

3.30 P.M. Griping pains in epigastrium continue, and darting pains in the temporal regions, worse from motion.

4.45 P.M. Headache still; giddiness; nausea; feel cold all the time.

6 P.M. Griping pain in the stomach continues, with soreness to pressure; dull pain, and a disagreeable confused feeling in the head, worse from motion.

March 12, 9 A.M. Have felt the pain in the epigastric region all the time, except when asleep; feel sore and stiff all over; feel as if I had taken a severe cold; seemingly rheumatic pains in left side of neck and shoulder of same side. Took *Aconite* to relieve.

Second Proving.

March 19th. Took ten grains of third trituration; took the drug at 6.30 A.M., in water.

6.45 A.M. Slight nausea; darting and transient pains in frontal and temporal regions.

7 A.M. Griping pains in right hypochondrium; pains in frontal and temporal regions, worse from motion; deep sighing.

7.30 A.M. Pulse variable; heavy feeling in the head, and darting pains through the temporal regions, worse from motion; giddiness, very disagreeable; nausea; sighing respirations.

9 A.M. Griping pains in the stomach, and great oppression; nausea; giddiness; worse from motion; better in the open air; darting pains in right hypochondrium; constricted feeling in the head, as if some tight bandage were tied around it.

11 A.M. Soreness and transient pains in epigastrium; soreness and pains as from rheumatism in left side of neck; pulse variable; giddiness; stomach unsettled; sighing respiration; a feeling of soreness in lumbar region.

2 P.M. Transient pains in stomach, with sensation as of undigested food; acute pain in left elbow, and darts of pain from thence to fourth and fifth finger, same side. (These pains seemed to begin in left side of neck and elbow, and thence extend to left leg, locating in left knee, and were constant for hours.) Epigastric region sore to pressure; giddiness, with a constricted feeling of the head.

3 P.M. Griping pains in stomach continue, and stomach still sore to touch; darting pains in various parts of the head, aggravated by motion; pains continue in elbow as above.

8 P.M. Giddiness has been a constant symptom.

9 P.M. Same trouble in stomach continues; soreness in lumbar region, with dull, heavy pains; a kind of paralyzed feeling in the left side throughout.

March 20th. Passed the night very quietly; was awake two or three times, and always felt the darting pains in region of the stomach, and the same paralyzed feeling in the left side; urine light-colored and very abundant; stool lumpy, mingled with watery discharge; soreness and pains continue in region of stomach.

10 P.M. Symptoms for the afternoon have been as follows: Giddiness and nausea; dull pain in head; heavy pains and soreness in lumbar region; constipated (very unusual); urine light-colored and abundant; severe heavy pain in lumbar region has followed me all day.

P.S. Seems to be curative in one-sided headaches, preceded by blurred vision.

PROVING OF PHYSOSTIGMA.

BY ROBERT C. SMEDLEY, M.D.

October 29th. Took 5 grains of thirtieth at 6 A.M.

October 31st. No symptoms. At 6 A.M. took 5 grains thirtieth; at 10 A.M. 5 grains more, and at 4 P.M. 5 more.

November 1st. Bowels, which had been somewhat costive, moved twice; appetite diminished. At 6 A.M. 5 grains; at 10 A.M. 5 grains; sensation of fulness and dull pain in transverse and descending colon; two soft stools after dinner, with tenesmus and dull pain in transverse and descending colon; last stool fetid and brownish. At 4 P.M. 5 grains more; two stools in evening, with similar pains and tenesmus during and after stool; stools soft, brownish and fetid, slight tenesmus of bladder at same time.

November 2d. At 6 A.M. 5 grains; not much appetite; two soft mushy stools after breakfast, with same kind of pains; head dull, heavy and full; drowsy at 11.30 A.M.; 5 grains more; same kind of evacuation and pains after dinner; brain feels tired; lay down and slept in afternoon (which I am not accustomed to); dreamt my head was full, and as if brain was revolving upwards from frontal sinus to occiput, and that I was almost blind; brain felt confused after waking; a numb or tired feeling of limbs, pulse accelerated. At 4.30 P.M. 5 grains more; same kind of stool and pain, and tenesmus of bladder after supper, and at 10 P.M. slight epistaxis, right side, in evening.

November 3d. Headache in morning, with epistaxis, left side, and same kind of stool after breakfast, with tenesmus of rectum and bladder during and after stool; drowsy; 9 A.M., 5 grains more; two hours after pain in both temples; in right temple shooting pain down to second bicuspid tooth. At 3 and 8 P.M. ten grains each time; no symptoms except epistaxis while at supper; diarrhœa ceased.

November 4th, 6.30 A.M. and 9.30 A.M., 10 grains each time; no symptoms.

November 5th, 9 A.M. and 2.30 P.M., 20 grains each time; no symptoms.

November 6th, 9 A.M. and 2.30 P.M., 20 grains each time; no symptoms.

November 8th, 9 A.M. 10 grains of third. No symptoms.

November 9th, 8 A.M., 10.30 A.M., 4 P.M., and 9 P.M., 10 grains of third each time.

November 13th. Was away from home since morning of the 10th, and took none; did not feel any unusual symptoms; took 10 grains third at 6 A.M., again at 9 A.M., 11.30 A.M., and 3 P.M.

November 14th. At 6 A.M., 9 A.M., and 3 P.M., 10 grains each of third, and on November 15th, at 8 A.M., took 10 grains more of third; had no symptoms except constipation during the days I took none, and when I recommenced had four passages in one day, but not loose; habits all regular, except during the past week I have lost a great deal of sleep. I am willing to give it a further trial, and in heavier doses. I have never yet, in the proving of any remedy, been able to take a dose or two and then have a number of symptoms to record. Has the natural constitution anything to do with it? I am of a long-lived healthy family on both sides, with naturally a great resisting power against disease or the abuse of health, yet this once strong constitution did succumb at one time under the burden I heaped upon it. When once prostrated I am slow in recovering. I give this observation that you may compare it with others. It may have something to do in the conducting of provings. I cannot say positively that the symptoms, while taking the thirtieth, were produced by the medicine, though they were unusual symptoms, for I seldom have diarrhœa; it has occurred sometimes. But the symptoms all left while taking the third.

I think it would be well to try it again, and see if the same symptoms would be again produced, before we could truthfully and reliably say they were the effects of the drug. As I have not considered the proving of sufficient value to transfer to another sheet, I send it as I noted it from day to day.

PHYSOSTIGMA.

PROVING BY S. LILIENTHAL.

Wednesday, October 29th. In my usual good health; lectured twice that day; attended my daily practice, and enjoyed during

the evening the meeting of the Hahnemann Academy at the house of Prof. Allen, where, with other provers, I took a powder of Physostigma[30] dry on the tongue. After chatting some time yet with members of the society, after the meeting dissolved a cigar was enjoyed on the way home.

Thursday, October 30th. Awoke in my usual good health; attended during the forenoon my office and outdoor practice, but came home rather fatigued. During the afternoon a severe attack of my habitual headache set in (had a sunstroke about seven years ago, and since then the left frontal and temporal region is liable to severe pressing, boring pain, as if a coal of fire was imbedded there, and the heat radiating to all sides; the veins of the forehead are swollen and stand out prominently), steadily increasing towards evening. Still, as I had invited a class of students to a quiz, I worried it out and then retired. Sleep rather restless.

Friday, October 31st. Woke about 4 A.M., with griping pain in bowels; had to go to the water-closet about 5 A.M., and from then to 9 A.M. had about eight to nine large watery stools; the first ones mixed with fecal matter, the later ones light-yellow, watery, gushing out in a stream, with faint feeling and cold sweat on the forehead. Griping pains usually before stool, but not much relieved by the stool. Took Verat. alb.[30], and as this did not relieve, a tablespoonful of old rye whisky, which sometimes gave me relief in similar attacks, but failed this time. I felt perfectly prostrated and obliged to lie down, but the continual calls of nature drove me up, although the stools were by this time (10 A.M.) not more than a tablespoonful, and odorless. The colicky pains continued; a dry griping pain in the colon transversum (or stomach?); constant nausea but no vomiting, only some water-brash; disgust for food, for tobacco, and coffee, and *especially for* COLD *drinks* (I am a great water-drinker). Took at noon a cup of English breakfast tea, a beverage I hardly ever use, but did not relish it; in fact I had no thirst nor hunger, but only wanted to be let alone, be well covered with woollen blankets, shut my eyes, and doze away the time. Took another cup of tea in the evening, but had to retire to bed at 7 o'clock, as the smell of the Havanas smoked by my young men, was disgusting and sicken-

ing to me. During the afternoon I took several doses of Yucca filamentosa, after Colocynth failed to relieve.

The heat of the bed felt agreeable, as I could not throw off the sensation of chilliness which followed me the whole day (did not urinate for the last eight or ten hours, although frequent and copious micturition is rather the rule with me). Dr. Burdick was called in, but did not change the Yucca. Slept moderately well, but the paroxysmal light gripes disturbed me. As long as I laid on my right side, well covered up, I could rest and doze, but as soon as I turned on my back, the griping returned with full force, and was only relieved by turning on my right side again.

Saturday, November 1st. Am in the habit of taking a cold sponge-bath every morning, but I feel *a perfect horror for cold water*, and therefore omit it. The least motion increases the dry griping pains in the upper part of the abdomen, but there is not so much disgust for food, still I do not relish my usual cup of *café au lait*, and the toast remains untouched. The griping pains differ somewhat from yesterday, as they extend to the back, causing there a lame sensation, as if support was needed. No thirst, no appetite; perfect impossibility to concentrate my mind or to translate a single line; all I wish is to rest and sleep, if the gripes would only allow it. Several times (2 to 3) to-day a desire for stool, but only a small quantity of water escaped, and once some very foul-smelling flatus. Hardly any urine passed during the day. Towards evening the griping steadily increased (in spite of Dioscorea and Lilium), and the warmth of bed was early sought for relief.

Sunday, November 2d. The gripings continued the same till about 3 A.M. (relief by lying on right side, aggravation on back), when I rested more quietly till about 7 A.M., when I dressed (omit cold sponging), and went to the barber. As *the fresh bracing air strikes me*, a choking sensation, with fluttering of the heart (suffered frequently from this nervous affection between the age of 16 and 20) overcame me, and oppressed me during the whole forenoon. I heard and felt the fluttering of my heart in the throat, with the sensation of faintness by motion, and some relief in a recumbent sitting position, not by lying down (Bromine[50] without relief). A bilious stool and natural micturi-

tion at 10 A.M. Ate some light breakfast from mere habit, but still no desire for food. Off and on still griping pains; also some little headache at the old spot. Perfect disinclination to any mental work; laziness and apathy rule supreme. 4 P.M., relished a light dinner and a glass of claret. Micturition more freely; gurgling in the bowels, with the sensation as if diarrhœa would set in. Fluttering keeps steadily on, with attacks of vertigo, towards evening, especially when changing position. Heart's action irregular, thus about in its action – – –, – ∪∪∪ one two, intermission, one two three, intermission, one two three four; the choking sensation in pit of the throat is steadily present; sometimes it seems to me as if I could hear every artery of my body beat. Prof. Burdick saw me again, and thought a dose of Sulphur[30] (especially horror for water) might do me good. I took a dose; in about twenty minutes afterwards a severe aggravation set in; I had to lean forward to catch my breath; deep sighing relieved me; hot sweat stood on my forehead; my hands were cold and damp; this lasted about a quarter of an hour, when the spasmodic action of the cardiac ganglia gradually ceased and I had a comfortable evening, retiring about eleven.

Monday, November 3d. Slept till 5 A. M. well, and woke refreshed. Took my usual cold sponge-bath, ate a very light breakfast with very little relish, but felt glad that the horror to cold water was gone; still no thirst. As the day wore on a general prostration set in again, as if my feet were too weak to hold me up; reading was tiresome, and speaking an effort. The heart's action is still irregular and sometimes tumultuous; radial pulse weak, 75, every 8 to 10 minutes beat intermitting; old headache moderately on left side; occipital headache, more of a tired sensation in cerebellum; urination natural, though not so frequent as usual; no stool nor any flatus. I tried to walk out, but had to give up on account of general prostration and soreness of bowels produced by the motion; was asked by a physician if I do not suffer from diplopia, as the musc. int. seems not to do its work rightly, and the axis of the eyes differs in each; but my eyes felt only weak, with lachrymation, especially of left eye, from which I suffer when having my usual headaches. Off and on the reminiscences of the old intestinal cramps, but no flatus.

Thursday, November 4th. Slept restlessly the whole night. Sometimes still some crampy sensation in pit of stomach, and the headache not quite gone. But general feeling is more elastic, and I believe I may safely return to my daily labor.

Dr. Houghton, Proving 3d. At 8 P.M., one dose. In 1½ hour uncomfortable sensation in right ear; felt inclined to bore in with the finger; picked the ear and removed some wax, after which slight pain. Eructations from stomach of warm air, tasteless. *With eructation* a sudden pain, running from the throat along the Eustachian tube to the middle, leaving a transient stabbing pain in the middle ear. Eructation repeated and also the pain to the ear. (The uncomfortable sensation (desire to bore) occurred repeatedly for several successive evenings.)

The next day felt pains in right arm (as from hitting the nerve), tingling, extending from elbow down the ulnar surface and into the third finger, repeatedly for three days.

Miss S., 3d trit., 1 dose. Headache began about 5 o'clock, across top of forehead, increased till after going to bed and asleep, lying down.

Same P.M. pain in right wrist as if squeezed and gradually let go (deep in the bone), and pain under right shoulder-blade, felt while sitting, transient (deep). Pain in right great toe, transient; ache around the toe.

Prover X. Took, 1865, 17th March, one grain of the 3d centesimal trituration, 5.30 P.M.; nothing following, repeated, 8.20 P.M., two grains; five minutes after a dull pain in left occiput, lasting ten minutes.

On the 25th of March took several drops of the tincture of Calabar bean. In half an hour a heaviness in the stomach, later a stimulus, as he called it, in the neck, in occiput, going through the whole head until it reached the eyes. This lasted an afternoon and evening. Next day, sleepy; headache; acted foolish; said it made him crazy. Feels as if he had taken a cold; his eyes were worn as usual, the sight bad all the time. Rather dull; clouds passing over the sun interrupt his walking.

Next day, sick at the stomach; prostrated; felt severely indisposed; had to lie down, and wanted the doors to be shut. Pain in the eyeballs.

N.B. Eyes were never examined because he was afraid.

Proving by E. W. Berridge, M.D.

Aug. 31st. Mr. ——, took five grains of powdered Physostigma, 10.30 P.M.; went to bed, 11.30 P.M., slept till 7.30 A.M.

Sept. 1. Woke up heavily (not unusual), with considerable stiff pain in region of liver posteriorly; tender on slight pressure, and on first moving; went off after moving a little. Disinclined for breakfast; no appetite; slight nausea; looked tired. 10.30 A.M., took six grains. Noon, great languor; very distinct nausea in throat, feeling as if he would be sick. Tensive headache; brain and scalp feel tight; difficulty of thinking, or doing mental work; hands feel trembling, as if he must make an effort to keep them steady; on walking, feeling of unsteadiness from knees downwards, so that he had to tread carefully, *especially when eyes are shut;* feels as if he must look to see where he is going; can see further than usual (is naturally myopic). Pupils contracted. On going out in open air must take a stick to steady himself, and has a feeling of weakness about the ankles. Determined exertion of will relieves the unsteadiness.

In morning, before second dose and lasting all day, noisy emission of flatus from bowels. Afternoon, when walking felt a stiffness in both recti-femoris muscles. Had dinner at 1 P.M., which he enjoyed, though feeling languid, but could not eat much on account of the nausea; he had to lie down, which relieved the nausea, after which he could eat a little more; after again resting, all symptoms passed off.

Sept. 2d. In morning, the same pain in liver region returned; there was also a stupid feeling in the head.

Proving by R. W. Stone.

April 3d, 1873, 3 P.M. Began taking 1 grain of 1st dec. trit., hourly.

4th, 9 P.M. Throat became very sore, with a feeling of a fish-

bone lodged in throat; swallowing of saliva very painful; unusual escape of flatus per anum.

4 P.M. Some eructations.

8.30 P.M. Violent and very unusual hiccough for forty-five minutes, with great distress for breath, relieved at once by sleep.

5th, 2 A.M. On waking again, violent hiccough, half hour.

6th, 2 P.M. Took four-drop doses of saturated solution every half hour.

7 P.M. Again a painful constriction of throat; soreness felt all through the posterior portion of pharynx, with painful swallowing of saliva. Throat became quite dry by 10 P.M.

7th, 11.30 A.M. Benumbed sensation in hands, very much increased by feeling of the pulse. Pulse of right side nearly double in strength that of the left.

4 P.M. The pain and constrictiou of pharynx still continued, and Dr. Waterman, on examination, discovered small ulcers with yellow centres on right side of the pharynx behind tonsil. Posterior nares also dark red.

10th, 4 P.M. to 10. Throat very sore; very difficult to swallow and examination shows surface studded with fine ulcers, especially on right side, where the pain is greatest. Am excessively nervous; cannot endure pain; specially sensitive during the filling of a tooth.

12th, 4 P.M. Examination shows uvula considerably elongated, and though I have discontinued medicine for two or three days, the throat symptoms continue, though less violent. Sharp headache on right side, transient.

14th, 8 A.M. Began taking every half hour one-grain doses of 2d dec. trit.

10 A.M. Heavy, dull, and oppressive frontal headache, with peculiar inability to express my thoughts clearly and intelligently.

17th, 2 P.M. Severe and sudden headache over right eye, with pulsation felt in occiput.

3.45 P.M. *Severe* muscular pains beneath the clavicles, extending down the inner sides of both arms.

18th, 2 P.M. Took 5 grains 2^{d} x trit., followed in five minutes by constriction of throat and difficulty of swallowing.

During the whole P.M. throat was very sore, examination showing enlarged tonsils and elongated uvula. Swallowing of saliva or speaking very painful; the posterior part of tongue also very painful to touch. Saliva was not increased.

23d. Had ceased taking medicine till now. 8.15 A.M. Took 30 drops of saturated solution, followed in ten minutes by severe pain in both mastoid processes.

24th, 8 A.M. Took 30 drops of saturated solution. 10 P.M. Nausea on lying down, though none was felt before; throat felt constricted as before, except that it was higher up.

25th, 7 A.M. Throat very much constricted, and great difficulty in eating, passing away before breakfast was eaten. Examination shows the posterior superior portion of mouth injected.

8.30 A.M. Took 30 drops of saturated solution, followed by an "all gone" feeling along the œsophagus, and headache.

3 P.M. Feeling of great debility; 20 more drops.

Proving by George W. Flagg.

Thursday, 6.30 P.M. Took first powder. 30th trituration.

Friday, 10.30 A.M. Have had uneasiness in abdomen all the morning, as though bowels were loose and I should have colic; very bad taste in mouth on rising; nose and throat filled with mucus. (*Have had similar symptoms, however, within a week.*)

5.30 P.M. Some uneasiness in the abdomen, as if the bowels were about to move; has been a remission of these feelings during the day; have had, during the day, more or less headache, or heavy feeling about the head, and bad taste in the mouth.

8.30 P.M. Rattling in the abdomen, with feeling as though the bowels were about to move, and that the stool would be diarrhœic.

Saturday, 6.30 A.M. Called up by quite severe colic, and went to the water-closet; stool neither hard nor very soft, but dark and offensive; colic during stool, and relieved by stool.

7 A.M. Another slight attack of colic; seems to be flatulent; some lassitude, but otherwise feel first-rate.

9 A.M. Discharge, with colic, before and during stool, with some burning at the anus.

10 A.M. Dull headache and lassitude; muscular weakness on going up stairs.

3.40 P.M. Slight nausea, then colic and desire for stool, with rumbling in the bowels, as from wind; some passed off.

6.30 P.M. Soft stool, with some colic before and during discharge.

10.15 P.M. Large, soft, offensive stool, with some tenesmus, and slight colic before discharge.

Sunday, 10.30 A.M. No symptoms, but had horrid dreams all night.

Monday. No symptoms.

Tuesday. No symptoms.

Nov. 21st. Some colic at 4 P.M.

6 P.M. Soft stool, with colic.

6.30 P.M. Another stool, diarrhœic, with burning at anus; want to keep very quiet.

Nov. 22d, 9 A.M. Soft stool; no pain; slight colic previous to stool.

9 P.M. Feel first-rate, and take a second powder of medicine. Previous to the above symptoms I have had a severe cold, *i. e.*, before the attack last evening; bowels have been regular.

Nov. 23d, 8 A.M. Arose with a heavy aching head; better after rising.

1 P.M. Heavy headache over left eye and extending over whole forehead, but most severe over left eye, as from a blow.

6 P.M. Headache some better, but eyes are sore and give pain when moved from side to side.

Nov. 24th, 8 A.M. Feel pretty well; no headache, but had bad dreams and a restless night; soreness in the rectum and urethra, and suspect I have taken cold.

Dec. 5th. Am feeling well, and have had no symptoms for a week or more.

11 A.M. Took a dose.

10 P.M. No reliable symptoms; have some headache.

Dec. 6th, 8 A.M. Arose with a dull headache, not persistent.

3 P.M. Since noon have had a persistent dull aching pain, not very severe, and situated over left eye; no other symptoms except a feeling of looseness of the bowels, with slight desire for

stool; am usually regular at stool, occurring every day at about 7 P.M.; pain over eye was from motion or pressure; pupils normal.

PROVING BY CHARLES E. ROWELL.

May 5th, 1874. Took a powder of Calabar bean, 30th trituration, at 4.30 P.M. (was up till three o'clock with a patient).

May 6th. Breakfast caused slight nausea. I have had frequent erections, with but slight sexual desire, this forenoon.

After dinner, upon going out of doors, had a pain in my stomach, which caused me to feel sick at the stomach; this pain was followed by a crampy feeling in fundus of bladder.

The quantity of urine passed is slightly increased.

At 5 P.M., I took a powder of the first trituration.

May 7th. Noise affects me (child crying); caused lateral headache; mind wanders from study; bowels constipated; amount of urine increased, and of a pale yellow color (all day).

At 7 P.M. took a powder of the first trituration.

May 8th. Pupils are contracted; have no appetite; bowels are constipated (have had no operation to-day); urine increased in quantity, and contains mucus; number of passages of urine increased; yellow color of urine; the amount of urine passed is greater than the amount of fluid I drink.

At 7 P.M. Took a dose of the first trituration.

At 9 P.M. Lateral headache, which seems deep in the brain.

May 9th. Pupils contracted; no operation from bowels to-day, but have urging without stool.

This evening (9 P.M.) my throat is very sore; tonsils and soft palate inflamed; dark red, with stinging pain. (Have taken none of the bean to-day).

May 10th. Pupils still contracted; throat not so much inflamed; no appetite or thirst.

9 A.M. Desire, without stool.

11 A.M. Desire, without stool; much urging and straining.

6.30 P.M. Headache in both temples; relieved by eating supper; (have taken none of the bean to-day).

May 11th, 7 A.M. Operation from the bowels large, light-yellow color, and soft consistency.

9 A.M. Operation of bowels, soft consistency.

12 M. Desire, without stool.

6 P.M. Intense lateral headache; relieved by eating supper.

7.30 P.M. Desire, without stool; urine scanty to-day.

8.45 P.M. Took a large dose of the first trituration.

10 P.M. Lateral headache, coming on while riding in a carriage.

May 12th, 7.30 A.M. Operation from bowels (was up till two o'clock last night); my eyes smart and feel as if full of sand.

8.30 A.M. Took a powder of the first trituration.

8.45 A.M. Smarting of the left tonsil.

9 A.M. Left tonsil slightly inflamed; radiating redness of tonsil; cough caused by tickling in the throat.

9.30 A.M. Twitching of the upper eyelid.

12 M. Took a large powder of the first trituration.

2.30 P.M. Stool, with much straining to pass a small amount.

6 P.M. Pupils very much contracted.

May 13th. Desire for stool early this morning, with large stool of light-yellow color; pupils contracted; passed large amount of yellowish-colored urine containing mucus to-day; twitching of upper eyelid; back part of throat very sore this evening (10 P.M.).

May 14th. Bowels constipated.

May 15th. Bowels constipated (no stool); increased flow of urine; lateral headache.

May 16th. Several operations from bowels (soft consistency).

May 17th. Three passages from bowels.

I have noticed that my headaches, which seemed deep in the brain, were nearly always relieved by eating. I also gave Dr. J. a very large dose of the first in the evening, and the next morning he reported lateral headache early in the morning, with fear of opening his eyes, because he was afraid it would increase the pain. Pupils were contracted, and there was slight increase in flow of urine.

PROVING BY E. J.

May 6th. Took a dose of the first, at 7 P.M.

May 7th. No movement of bowels; took powder of first, at 7 P.M.

May 8th. No movement of bowels, but desire several times without stool.

At 7 P.M. took another dose of the first.

May 9th. Pupils contracted; one small hard stool; urine increased in quantity, and yellow in color.

May 10th. This forenoon very copious passage from bowels; light-colored, with intense crampy pain in lower part of bowels while at stool (not often).

At 4 P.M. Copious passage from bowels of same character, and with same pain as this forenoon; twitching of upper eyelids.

May 12th, 8.30 A.M. Took powder of the first, and another powder at 12 M.

12.30. Twitching of upper eyelids (left one most), which is very annoying.

3 P.M. Took powder of the first, and at 6 P.M. another dose; am very thirsty this afternoon.

8 P.M. Had an operation from bowels; it was nearly impossible to pass stool owing to contraction of the sphincter; twitching of the eyelids.

May 13th. Desire for stool early this morning while in bed, with crampy pain in stomach, but after getting up the desire for stool left me; pupils contracted; sick at stomach.

May 14th. Bowels constipated; increased amount of urine; twitching of left upper eyelid; headache in the temples.

May 15th, 9 A.M. Stool, with much urging, very hard and dark-colored; pain in bowels during stool.

9.5 A.M. Urging, with passages of stool much lighter than first.

9.15 A.M. Very copious diarrhœic stool, yellow-colored, with burning, smarting pain (all three stools within 15 minutes).

8 P.M. Back part of throat very sore.

May 16th. Throat is not sore; bowels constipated.

PROVING BY CHARLES E. ROWELL.

1st Lot, 30th Trituration.

Nov. 6th, 4.20 P.M. Took powder No. 1. No symptoms.
" 7th, 4.20 P.M. " " " 2. " "
" 8th, 6.30 A.M. " " " 3. " "
" " 12.30 P.M. " " " 4. " "

2d Lot, 3d Trituration.

Nov. 11th, 4.40 P.M. Took powder No. 1. No symptoms.
" 12th, 5.00 P.M. " " " 2. " "
" 13th, 6.30 A.M. " " " 3. " "
" " 12.00 M. " " " 4. " "

3d Lot, 1st Trituration.

Nov. 13th, 4.30 P.M. Took powder No. 1; 6 P.M., No. 2; 6.45 P.M., No. 3, and at 7.10 P.M., took powder No. 4. No symptoms.

4th Lot, 1st Dec. Trituration.

Nov. 15th, 11.30 P.M. Took powder No. 1. No symptoms.

Nov. 16th, 8.45 A.M. Took powder No. 2. At 9.30 had a natural stool. At 11.40 had a stool of softer consistency than usual.

Nov. 16th, 3 P.M. Took powder No. 3. At 4.45 had an operation of bowels.

Nov. 16th, 6.30 P.M. Took powder No. 4. A great desire for cold water all of the evening. The more I drink the more I want. At 10.30 desire for stool, but no stool, although I strained very hard.

Nov. 17th, 6.15 A.M. Operation of bowels. At 7 A.M., took powder No. 5. At 7.10, passed urine of a clear yellowish color. At 8, 8.30, and 11, passed urine. At 12 passed a small quantity of muddy urine.

Nov. 17th, 12.30 P.M. Sensation of crawling feeling in left ear. At 2 P.M., took powder No. 6. At 2.10 P.M., operation of the bowels of a slightly yellow color and foul smell (soft consistency). At 6 P.M. passed urine. At 6.15 took powder No. 7. At 9.30 and 11 passed urine.

Nov. 18th, 6.30 A.M. Took powder No. 8.
" " 1.30 P.M. " " " 9.

Nov. 18th, 6.30 P.M. Took powder No. 10. Symptoms same as yesterday.

Nov. 19th, 6.30 A.M. Took powder No 11.

Had been constipated very much for years. No operation

without injection. Have a desire for stool every night, and a copious evacuation every morning since the proving.

The ear symptoms were as if every sound went through the ear. Ears were very sensitive to sound.

Feb. 7th, 9.20 P.M. Took powder No. 12. I went to bed an hour and a half earlier than usual. Was so sleepy I couldn't keep my eyes open.

Feb. 8th. Slept till after daylight, an hour later than I usually do. Upon rising, passed more than the usual amount of urine, of a clear, *slightly* yellow color.

Feb. 8th, 11 A.M. A very copious stool. Tongue is coated slightly; more heavily towards the root.

Feb. 8th. 3.30 P.M. Had passage from bowels of a yellowish color and soft consistency. Usually have but one passage from bowels each day, sometimes go two days. I have had no thirst at all to-day. Usually drink considerable with my meals; drank scarcely any to-day.

Feb. 8th, 6.30 P.M. Had an evacuation from the bowels of a foul smell. I am somewhat thirsty this evening, which may be due to eating beans at tea.

Feb. 8th, 10.30 P.M. Stool.

Feb. 9th, 6.30 A.M. Stool. Discharge of much foul-smelling flatulence from below. My food laid hard in my stomach all day.

Since proving, have been having two or three stools a day, at irregular times, not large, yellowish.

PROVING BY W. W. FRENCH.

November 6th, 1873. Took a powder a few minutes before 10 P.M. Thirtieth trituration.

November 7th. On waking in the morning, nausea and taste in the mouth like creasote, perspiration over the whole body, pain in the umbilical region. Was relieved by going out, but all excitement during the day brought on perspiration.

November 9th, 4.45 P.M. Sharp and cutting pain in the lower part of the abdomen, more like the muscles than the organs. Going down stairs, pain under the patella of both knees. Pulse slow by several beats.

November 14th, 10.40 P.M. Took a dose, second preparation, thirtieth trituration.

November 15th, 6.30 A.M. Took a dose.

7 A.M. Nausea, bad taste in the mouth, full of saliva; tongue feels rough to the touch. Severe pain across the abdomen (transverse colon). Drawing pain in the right iliac region, relieved by lying on the right side, by pressure on walking in the open air, and eating. Worse by lying on back and left side.

10.15 A.M. Pain in head over the right eye, dull and weary; profuse sweat on the least exertion. Pulse slow.

PROVING BY G. S. FARMER.

(New York Homœopathic Medical College.)

November 6th, 5 P.M. First dose, thirtieth trituration.

November 7th, 5 P.M. No symptoms.

5 P.M. Second dose, thirtieth trituration.

November 8th, 9 A.M. A burning and aching pain in forehead, which continued during day, and until retiring at night.

11 A.M. Heaviness and weakness of limbs, and general weariness of whole body; easily exhausted upon going upstairs. A burning spot in centre of forehead.

1 P.M. Symptoms more severe, with a fulness in ears, and stupid feeling in head. Relieved by closing eyes and keeping quiet. Aggravated by mental activity and exercise.

4 P.M. Tenesmus, which continued for an hour, when there was an evacuation of soft thin stool, which was followed with great exhaustion; color of stool quite natural. Hiccough from 5 P.M. until 8 P.M., of violent character. Pupils dilated, and general weakness all over body.

November 9th, 9 A.M. Very weak, especially in groins; other symptoms not so severe as were previous.

9 P.M. Some weakness of body, and easily exhausted.

November 10th. A little weak, otherwise as well as ever. (The tenesmus was a feeling all the time as though he had been to stool.)

November 11th. Easily exhausted; no other symptoms.

November 13th. Third dose in morning upon rising.

12 M. No symptoms.

1 P.M. An aching, burning pain in forehead, and sensitiveness of eyes.

4 P.M. General weakness and tired feeling. Frontal headache on eating, exercise, or mental exertion. Weakness after stool, and great tenesmus; feel for a half hour before as if had been to stool. Stool is light-colored and very soft, not thin or watery. Color quite natural.

7 P.M. Symptoms *more intense*. Headache of a burning, aching character. Head feels stupefied. Great weakness of right side; a slight pain in right side, in region of sixth and seventh ribs.

9 P.M. Symptoms about the same, with hiccough, which continued until after 11 o'clock; ceased on retiring.

November 14th, 8 A.M. Great weakness and stupidity; feel as if had been out carousing the night previous (or as those feel who do go out carousing at night). Some headache; eyes feel weak and sensitive. Stool quite thin and light-colored, followed with tenesmus. Headache worse on right side. Ears feel as if stopped up.

12 M. General languor and some frontal headache; stool thin.

9 P.M. Symptoms much better; stool soft and some tenesmus.

November 15th, 9 A.M. Some weakness; stool quite natural. Head feels dull and heavy.

10 P.M. Tired feeling.

November 16th. Easily exhausted; no other symptoms.

November 17th. Some exhaustion on walking.

November 18th. No symptoms.

PROVING BY P. N. CROSBY.

(New York Homœopathic Medical College.)

November 6th, 8.20 P.M. Took first dose, thirtieth trituration.

November 7th, 5 P.M. Dull pain in bowels with feeling of looseness. Pressure on the tympanum of each ear, which is painful.

November 8th. Repeated at 7.45 A.M.

9 A.M. Stupefying headache; dull pain through forehead; more severe over the left eye.

10.15 A.M. Headache increased; headache continues through the entire day until about 6 P.M. No other symptoms.

November 10th, 7.40 A.M. Took the third dose. No symptoms.

6.40 P.M. Took another dose.

10 P.M. Very restless in bed, not feeling satisfied in any position. Rumbling in bowels.

5.10 A.M. Bowels move, but not a profuse discharge; stool of a yellow color; considerable pain accompanying stool, pain being located just below the umbilical region.

November 11th, 5 P.M. Took second preparation, thirtieth trituration.

November 12th. Pain in head, more severe over the left eye, commencing in the morning; in the afternoon, growing worse and gradually increasing until 10 P.M., then beginning to subside; at the same time head bathed in warm perspiration. No other symptom except being quite restless through the night. Awoke in the morning feeling perfectly well.

November 13th, 11.40 A.M. Took second powder of second preparation. During the afternoon some headache, increasing towards evening. Pain about subsided by 10 P.M. Head feels strange and confused.

November 14th. Awoke at about 3 A.M., with a severe pressing headache, confined to sinciput and over the left eye.

Proving by J. P. W.

J. P. W., past middle age; general health good; uses no coffee, but weak black tea, as a beverage; no tobacco or alcoholic stimulants of any kind; pulse 70; temperature of body normal.

November 15th, 7 A.M. Took first powder (30th trituration); noticed no effect for twenty-four hours; then took the second, then third. Three hours after a desire for stool, but was much constipated; fæces hard and not much in quantity. Six hours after very loose diarrhœa (watery), with some flatus; pain in region of the arch of colon, mostly on right side, with stitches of pain extending through to back; pain increased at night so as

to frequently wake me up; a constant desire to change from side to side; headache; neuralgic stitches in muscles of knees and arms; fulness of head, almost to faint feelings at times; a raw feeling of the tongue, very disagreeable in swallowing; sleep disturbed; wake wideawake about 2 A.M., and remain awake till about 5, then a very deep, short sleep of about an hour; on awakening a very disagreeable feeling, as though I had slept too sound, with pain on right side of head and right side of neck; feels sore and stiff, similar to what is called a stiff neck; cannot bear my pillow high; feel as though my head would be easier on a single pillow; on walking, noticed some two or three times during the day, on raising my foot, a momentary feeling as though I was going up, floating-like, and on foot touching ground an unpleasant feeling, that made me feel a shuddering sensation pass over me; my mind is disturbed; cannot concentrate it at times on any one thing; unsettles me for study; some five days since the proving has affected me, and yet inclined to looseness of bowels; at times I noticed that I did not care for eating; appetite previously good at any time; pulse at times reduced to 65.

Proving by Theodore Foote, M.D.

November 6th, 8.15 P.M. Took first dose. 9.30. Great *prostration of muscular system;* feel as if I had taken a five-mile walk.

November 7th. Woke up with a *severe headache* in forehead. 12 M. Still have this same feeling of prostration, with some headache. 10 P.M. Considerable headache in forehead; prostration still continues, but not so marked.

November 8th. Symptoms continue about the same; no new ones. 12 M. Prostration and headache light. This headache was very severe, and never before experienced; could not put my mind on anything; could not recollect anything; a mental exhaustion, not confusion.

Proving by J. M. Dart.

November 6th, 8.10 P.M. Took one powder (30th) one hour

and a half after eating a light supper. 9.5 P.M. Three distinct hiccoughs, followed by belching of tasteless gas; something unusual, but don't know that it is a symptom. 9.15 P.M. Pricking sensation in the stomach and abdomen, followed by rumbling, and slight colic pains in the region of transverse colon, lasting nearly an hour. 10.25 P.M. Retired, and slept very well; somewhat restless towards morning.

November 7th, 7.30 A.M. Breakfast, appetite not very good. 8.45 A.M. Large diarrhœic stool, with burning at the anus; bowels moved just previous to taking the drug, and am nearly always constipated. 9.3 A.M. Pricking sensation in the stomach and bowels. 9.30 A.M. Sharp pains in the stomach, shooting upwards. 9.50 A.M. Sharp lancinating pains in left hypochondrium, left thigh, and left forefinger, passing off very soon, and followed immediately by a sharp pain in the region of the liver, passing upwards and towards the sternum, lasting but a few minutes. 10.15 A.M. Headache in left frontal region, with sensation of heat in the abdomen, and slight nausea. 11.15 A.M. Headache continues, but dull and heavy. 4 P.M. Headache has become general over the whole head, with qualmishness and slight perspiration over the body; feel very languid and dull; eyelids feel heavy. 5.50 P.M. Bowels feel uneasy, as if they would move soon. 10 P.M. Retired; headache continues, with qualmishness; sleep very good.

November 8th, 6.45 A.M. Awoke with slight nausea; no appetite for breakfast; headache less. 10.25 P.M. Headache has continued nearly all day, with lame, bruised feeling in the region of kidneys; at times slight nausea.

November 9th, 8 A.M. Feel perfectly well.

November 10th, 8 A.M. Took one powder (30th). 8.40 P.M. Rumbling and gurgling, with heat in the abdomen, and slight colic pains; the symptoms, except colic, continue till 11 P.M.

November 11th, 7 A.M. Very restless through the night; awoke with headache in left frontal region, which afterwards extends all over the head; the pain is of a dull heavy character. 10.25 A.M. Pain in region of the liver; feel dull and languid; eyelids feel heavy. 1 P.M. Headache still continues, but seems to increase in the left frontal region; bowels feel full, with some

rumbling and heat. 10 P.M. The headache still continues; can hardly sit up.

November 12th, 7 A.M. Headache still continues; slept very well. 8.10 A.M. Diarrhœic stool, with burning at the anus. 3 P.M. The headache is the worst I ever had; bowels feel as if they might move at any time; feel very irritable; cannot study for the pain in my head; eyes feel weak. 10 P.M. Headache still continues, but not so tormenting; feel sleepy and retire.

November 13th, 6.30 A.M. Feel perfectly well; the pulse has been, through the whole time, from 66 to 69; when well about 70; headache, dull, heavy; began in left frontal prominence; extended deep into brain; lids heavy; headache when walking in open air, lying down; could not study; on walking became excessively tired; could hardly get along; vision seemed hazy or misty while walking; better at once by keeping quiet.

The two provings were alike. I never experienced such symptoms before.

Proving by L. L. Brainard.

L. L. Brainard; sanguine temperament; blonde; weight 168 lb. (N. Y. Hom. Med. Col.)

November 6th, 4 P.M. First dose (30th).

November 7th, 11 A.M. Second dose; no symptoms. 1 P.M. third dose.

November 8th, 11 A.M. Fourth dose; no symptoms.

November 11th. Second preparation. First dose 5 P.M. (3d trituration.) 6 P.M. Expansive sensation in top of the head. 10 P.M. A slight aching pain in left eye.

November 12th. Awoke with aching pains in whole brain, worse on left side; aching pain in posterior part of orbit, extending back into the brain; worse on reading (aches so cannot read), causing nausea; full pulse, 72; chills in paroxysms.

November 14th, 7 P.M. Second dose; no special symptoms.

November 19th. First dose. Third preparation; no symptoms.

Proving by Francis A. Gile.

November 6th, 4.20 P.M. Took first dose (30th); ten minutes

after taking felt film over the eyes, and blur; objects mixed; after which dull pain over the eyes, and between the eyes, lasting for one hour; sometimes have had similar feelings, but not often; I am not positive it was the effect of the drug; no result from last.

PROVING BY J. W. R.

Taken at 3 P.M., one dose 3d trituration; first night restless; pain in right deltoid muscle, which kept me awake during forepart of the night, which was relieved only by violent motion (pain, nervous, uneasy); second day, experienced similar pain in right arm, and restless as before at night, and wakened in the morning with dull heavy frontal headache, *over the eyes*, which passed off on rising; third night, as usual, restless; and fourth day, in the evening, about 6 o'clock, felt soreness in the *umbilicus*, and a sensation as though corset had pinched it. On examination at about 8 P.M., found the part very much inflamed (blood-red), very sore and could not bear the contact of the clothing; following morning, inflammation somewhat decreased, but part still sore; soreness and inflammation continued for about four or five days, growing less gradually. At the time of taking Calabar bean, had been troubled with a bland, milky-white, stringy leucorrhœa, for about two months, not at all profuse, but rather scanty; have not been troubled with it since taking the bean.

June 15th. Took a powder of 3d trituration; felt nothing after taking Calabar bean, till evening at about 8 o'clock, when a deep pain in muscles of right forearm and wrist came on, and with it a dull aching pain at times occurred.

Pain, with sharp stitches, in the ball of right eye, and in the frontal bone, with a distinct pain running obliquely into the temporal bone.

June 16th. This evening, experienced severe pain in the eye, as above.

Pain moving; gnawing in inner aspect of wrist, deeply situated; from wrist it ran up along ulnar side of forearm to elbow; had a desire to move the arm and work it out, which did not relieve it.

Pain, deep in, over top of ball; ran up from inner canthus to the right frontal eminence, then down obliquely outward into temple; dull miserable pain.

Same in eye and forehead returned, not as severe, but more general over the forehead, relieved by motion out of doors.

PROVING BY W. H. TITUS, M.D.

(Student of Hahnemann Medical College of Chicago.)

I received the drug of Prof. Hoyne, on December 11th, 1874, not knowing what it was, with the instruction to take about 1½ grains at a time. Took the first dose (3d) the morning of the 12th. Previous to this I had examined as closely as I was able the condition of my body. My bowels were regular; urine normal in quantity and specific gravity; appetite good; weight, 174; felt no inconvenience from the dose during the day; in fact forgot I had taken anything, and slept well during the following night; arose the next morning with a bad taste in my mouth, as though I had been confined in a close room all night; my teeth felt rough, which brushing did not remove; went to church, but while there, was taken with a chilly sensation in my back, and soon commenced to yawn and have bad feelings—a sort of bruised feeling in my joints; every draft of air seemed to make me shudder; every time I moved the same bad feeling would come upon me; in fact, I was sick. My pulse was 93, temperature about 100°. My throat began to be sore on the right side; seemed to be a little spot not larger than a pea, which bothered me a great deal in swallowing; profuse salivation followed; pain in the top and forepart of my head. This increased until I had to lie down; could readily count my pulse in the carotids, and hear the two sounds of the heart as my head lay upon the pillow. Soon began to have backache, which kept me restless all night; pain seemed to be in region of the kidney, and I commenced passing large quantities of colorless urine. No position favored the pain in my back, but my head was very much better when I sat up in bed; strong pressure also relieved; walking seemed to relieve the pains, but I had not strength to continue for any length of time.

December 13th. Pain in the bowels, which seemed to be dis-

tended with gas; darting pains in joints; more in the legs than arms, extending up into the body; felt great anxiety about friends at home; could not get them out of my mind; could sit up only a short time, when I would be compelled to lie down again, on account of the pain in my bowels. This pain was worse every time I stood erect; pain in my knees worse when I flexed them; throat still sore on the right side; urine profuse, and very clear; passed nearly a vesselful during the night of the 13th, by nine emissions.

December 14th. I now noticed my left eye was also red and swollen, and submaxillary gland very tender and tumefied; stools very hard, and in round balls, but quite easily expelled; pain and flushing of the face on rising from a sitting position; strong-smelling sweat around the genitals; prepuce tender and swollen, with some eruption on the glans penis, which was easily excited, with a burning, itching sensation (these all disappeared in about forty-eight hours); eruption upon the back about the size of flea-bites; the same petechial eruption on the arms. Pains, which are of a darting character, wander from one place to another; tongue coated white, and having an oily feel, with a very bad taste in the mouth; had a curious feeling in my face; felt better when my mouth was open. At times this same feeling extended down into my neck. I cannot describe it, but it seemed to be of a cramping nature or in spasms. At the time when this was the worst, my left hand became quite numb, and it bothered me to hold on to anything. This I noticed most when I went to look at my watch.

December 15th. All troublesome symptoms have now passed off, and I begin to have a good appetite. It may be well to say here, that I had a perfect disgust for food of every kind during the whole proving. It now being so near the New Year, I put off taking any more of the drug for the present.

January 25th, 1875. Took a dose of the drug, and feeling no effects from it after waiting forty-eight hours, took another dose, and in twelve hours a third. This occasioned about the same symptoms as before, but not quite so well marked. I found no eruption appearing, but the urinary symptoms were the same.

February 18th. Took the drug again with the same effects.

The after-trials were not attended with as much success as the first, and no new symptoms were gathered from them. The symptoms upon which I lay any stress, may be enumerated as follows:

Mental.—Much anxiety about friends at home; much troubled about my position in bed; nothing was right; too many things in the room; continually counting them.

Head.—Pain in the top and forepart of the head; relieved by strong pressure. Sitting up in bed relieves the pain for a short time; carotids throb with a double beat, heard as my head lay upon the pillow.

Eyes.—Right eye first inflamed, then the left; sclerotic red, dry and swollen; eyes feel best when closed.

Mouth.—Very bad taste in the mouth, as though I had slept in a closed room; teeth feel rough; brushing does not remove the roughness.

Throat.—Throat sore on the right side in one place not larger than a pea; profuse salivation, with great thirst; pains in the bowels, which seemed to be distended with gas; pain worse when in an erect posture; profuse flow of very clear urine. The urates were less than normal in quantity; phosphates in excess; pain in the urethra just after micturating.

Back.—Pain in back worse when lying down; dull aching pain in region of kidneys; walking relieves the pain in the back, but increases the headache.

Limbs.—Darting pain in the knee-joints when flexing them; darting pain in all the joints; more in the legs than arms; chilly sensation, aggravated by moving, or any draft of air; flashes of heat in different parts of the body; temperature 100°.

Stools, etc.—Stools very hard and in round balls, but easily expelled; strong-smelling sweat about the genitals; prepuce tender and swollen, with a number of small vesicles upon the glans penis. These disappeared in forty-eight hours.

Eruption upon the back the size of a flea-bite; the same petechial eruption upon the arms; pains wander from one place to another, and are of a darting character; tongue coated white and having an oily feel; cramping sensation in my face, feels better on opening the mouth; cramping sensation in neck; at

the same time left hand numb; found it hard to hold on to anything with left hand. The action of the drug is about four days.

Proving by A. P. McDonald.

(Student of Hahnemann Medical College of Chicago.)

Dr. A. P. McDonald, student of Hahnemann Medical College of Chicago, December 29th, 7 A.M., took a dose of a drug given me by Prof. Hoyne (30th). 6½ P.M. felt severe pains in the right eyeball, darting from within outwards; relief from pressing on the eye. The pain continued at intervals till 10 P.M., when it seemed to shift to the supraorbital ridge, and continued so until about 12.

December 30th, 7 A.M. As soon as I got up experienced severe darting pains in both eyes; pain darting outwards. Experienced no pain after breakfast. 7 P.M. As soon as I sat down to study had the same darting pains in the left eye and superciliary ridge. Same character of pain and relieved by pressure and moving about. Pain gradually diminished until 11 P.M.

December 31st. Frequent paroxysms of muscular twitchings in the lower one-third of vastus externus muscles. These paroxysms came on every time I sat down, and so continued all day.

January 1st, 1875. No symptoms.

January 16th. Took another dose; no symptoms.

January 31st to February 18th, no symptoms. Before and during this proving I had some symptoms of indigestion, resulting from sedentary habits, which I carefully excluded.

Proving by W. H. William.

(Student of Hahnemann Medical College of Chicago.)

W. H. William, student of Hahnemann Medical College of Chicago. Took the medicine (30th) at 2 P.M. At noon the following day chilly on the right side of the back; vomiting of an acrid fluid; slow digestion; continual yawning, with a drowsy feeling all day. Severe colicky pains in the left side of the abdomen. Neuralgic pain in the right side of the face; dull pain in both temples, with pressing outwards in the frontal region.

Next day. Head feels as if it was falling forward; vertigo; stumbles on going up or down stairs; sharp pain in the supra-

orbital region, running off towards the nose. Back very weak, am unable to stand erect (continued two days); dull pain in the back, with almost constant desire to urinate, passing large quantities of reddish urine. Oppressed breathing. (Pulse first day, at night 60, next morning 84.)

Two students, who made no written report, state that the urine was greatly increased in quantity.

PROVINGS BY THE STUDENTS OF THE BOSTON UNIVERSITY SCHOOL OF MEDICINE.

Soon after receiving the triturations of Calabar bean, the following provings were made by members of the class in January, 1874.

I.

Mrs. S. Nichols, medical student, took one grain of 30th trituration at 3 P.M.; in fifteen minutes brassy (?) taste and increased saliva, which continued the rest of the day. In the evening there was cough, from tickling in the bronchi (throat).

Tuesday morning. Had slept better than for six months before. Took one grain of trituration; felt quite exhilarated during the morning; very gloomy towards noon.

At 1 o'clock (on Tuesday) took 1 grain; at 3 o'clock felt as though (mucous coat ?) (of) stomach swelled, continuing all day; several empty eructations. At 4 P.M. hard, sore pain in splenic region, descending to inguinal region, across hypogastric region, quite severe and increased by motion. In the evening the pain was so severe it caused me to extend the legs.

Took two grains before retiring Tuesday night; slept very soundly.

Wednesday morning took one grain; had a bad taste all day; paroxysms of burning in palms of hands; soreness in left side and hypogastric region, hurting me to stand.

At 4 P.M. (Wednesday) took one grain; *tongue felt sore on tip* and rough; throat full; stomach pressed; sore pain in spleen for two hours; *eyes smart; lids feel sore;* in the evening hammering in right ear, while external ear felt as though hot air were blowing on it.

Took one grain before retiring Wednesday night and *slept unusually well.* (Curative? C. W.)

Thursday morning took one grain; while writing felt pain in right ear; tongue dry and rough and sore; in the afternoon pain in left of sacrum.

Friday morning, pain in left side of sacrum; headache Friday evening and Saturday morning; no symptoms afterwards.

II.

Mr. C. S. Collins, medical student, took one grain 3d trituration Monday night; after three hours, dull pain in region of heart, lasting nearly an hour.

At 7.30 Tuesday morning, one grain; at 10 o'clock pain in back of neck reaching to first dorsal vertebra.

3 P.M. Pressure (bearing down) on top of head; hot cheeks; eyes suffused with tears.

9 P.M. Took one grain; no effect.

Wednesday, 8 A.M., one grain; at 3 P.M. very sleepy, hardly able to keep awake, till finally relieved by sleep.

At 9 P.M. took one grain.

Thursday morning awoke with stitches in left breast; unable to take a long breath; symptoms continued all day; pains were so uncomfortable that no more medicine was taken.

Friday, the pain in left side all gone.

The prover is 21 years old, health very good, and he is of strictly temperate habits.

Mr. A. L. Kennedy, medical student, fair complexion and healthy, but of sensitive organization.

Second day, after taking the 3d trituration of Calabar, felt slight contraction in region of stomach.

Third day, contraction* in region of stomach more plainly marked, continuing four or five days, attended with dull pain in left side and forepart of head; not relieved by food; appetite as usual.

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* It is to be noted that what one prover distinguished as contraction another describes as swelling of stomach.

The symptoms began to diminish on the sixth day, and had disappeared about the eighth day.

III.

Mr. L. T. Hayward, medical student, reports: Have been suffering from a dull, pressing headache for nearly six months; comparatively free from it in the morning on rising, but increased by the least mental exertion, until at night, after retiring, it would become almost unbearable; accompanying the pain was sleeplessness and inability to stop thinking; in the course of an hour or two the headache would pass away suddenly with a sharp radiating flash of pain, sometimes starting from the occiput and passing forward, at other times passing from before backwards. *This headache I found to disappear after taking this medicine* (Calabar 3d trituration), but my sleep was disturbed by lascivious dreams, and by emissions early in the morning.

Mr. Dillingham, medical student, in good health, proved third trituration of Calabar bean, and noted the effects according to the parts or regions where they occurred.

Head.—Pain over right eye all the evening, 8th of January (?). Dull, heavy headache in forehead before rising. 12th. Dull, heavy feeling of head; headache through forehead.

Eyes.—Lids, which are usually heavy, were less heavy, and can look more steadily at an object (10th); but lids grow heavy again later. Bright marks when looking at an object. Dark yellowish spots on book when reading, covering one or two of the letters.

Ears.—Singing or tuning like escaping steam, after lying down at night.

Nose.—Stuffed and hot, 8th.

Face.—Flushed and red, 9th.

Mouth and Throat.—Smarting of end of tongue; feels as if burnt by hot liquid.

Stomach and Abdomen.—12th. Hunger, but can find nothing to satisfy it; disposed to try one thing after another (food has a flat taste). Tasteless eructations.

Stool and Anus.—Stool, first regular, then irregular and loose; anus sore, inclined to *protrude* a little (as if from relaxed sphinc-

ter). Passage of much wind, odorless. Stool very loose and weakening. Return of piles, which have not troubled him for three years.

Urinary Organs.—Frequent desire to urinate. Goes to the chamber several times with the inclination, but passes no urine.

Sexual Organs.—Two emissions without dreams or excitement.

Respiratory Organs.—Slight cough; irritation of right bronchi; coughs until small white plug of mucus is thrown off. 10th. Cannot fill left lung, as it produces a dull pain in upper part, relieved by pressure. Stitches under interior angles of scapulæ during expirations. Slight constant inclination to cough from filling the lungs.

Back and Neck.—Cramplike stitches up and down the spine. Stiffness of neck on left side.

Upper Extremities.—12th. Wrists feel weak; dull, aching pain in them. Hands are cold, then hot and red.

Lower Extremities.—Cramps in calf of left leg in bed. Felt unusually warm. Numbness in left foot.

Sleep.—8th. Good. 11th. Heavy sleep; feel tired before rising. *Profound sleep;* does not see why he should sleep so soundly. Vivid, pleasant dreams.

Generalities and Conditions.—Feels better outdoors and walking; perspires very easily. (Better in warm room from not moving. Does not wish to speak to some of his friends.)

Fever.—Normal pulse is 60 to 65. January 8th, 5.30 P.M., pulse was 83, full and strong. January 10th, pulse was 74, full and strong. January 12th, pulse 76 in the morning, not as full or strong. January 12th, 5 P.M., pulse variable—76, quite weak. Not having taken medicine for three days, pulse returned to 60.

The provers were advised to take a grain at a time of 3d to 30th trituration of Calabar (not knowing what they were taking) till symptoms appeared, then to omit the medicine, and only to repeat it when no more symptoms appeared. Fourteen provers took the 3d trituration; of these, four reported as above. Several of the others used up many grains of the 3d trituration without noticing any effect. Six provers tried the 30th tritura-

tion; of these, only one, Mrs. S. Nichols, reported as above; the rest noticed nothing. I have carefully examined the reports in the presence of the provers, and have here given only what I consider as reliable.

C. WESSELHŒFT.

PHYSOSTIGMA VENENOSUM.

PRESENTED BY ALFRED K. HILLS, M.D.

Saturday, October 25th. Prover female; light complexion. At 11 P.M. took one powder of thirtieth dilution.

Sunday, 11 A.M. In church, had a dull aching in temporal and frontal region; skin of forehead and nose felt tense, making it difficult to close the eyes; this feeling continued for some fifteen or twenty minutes, then a remission, then commenced again; after leaving church experienced very little of this sensation until in the evening in church again, when in passing people in the doorway, if they stepped in front of me, felt very dizzy; the sound of the organ caused a return of headache, and also nausea; also a sensation of heat in face and down the back, as when the sun shines directly upon you on a cold day, while lower extremities were rather chilly; slight headache until retiring; worse in frontal and temporal region.

Monday. While taking usual morning cold bath was suddenly seized with stiffness in right side of neck, which extended during the day to the right shoulder, and also to clavicle, which felt sore, and was swollen over sterno-mastoid muscle; there was much pain from every attempt to move, and was relieved from leaning head towards right side; this pain continued quite acute all day, extending towards evening through right lung also; at times the pain in neck and shoulder was so severe as to cause nausea; considerable sharp pain also in right ear.

Tuesday. Stiffness in neck and pain in ear almost entirely disappeared, only a little soreness remaining. 1 P.M. Same headache as on first day, only more intense, with such sleepiness that the effort to keep awake produced nausea; this headache did not abate until about 6 P.M.

Wednesday. A little soreness still in muscles of neck; headache still, occasionally but very slight, and sleepiness as before.

Thursday. Headache of same character; worse in warm room, especially after being in open air; symptoms wore off gradually in two or three days, with nothing marked, unless, perhaps, an appearance of customary troubles in slight degree, as sore throat and some cough.

PHYSOSTIGMA PROVINGS, 30.

BY MISS A. E. GRIFFITH.

Took one powder October 21st, 1873.

October 22d. Bruised sore feeling in region of kidneys; increased secretion of urine, with difficult retention in the forenoon; very great reluctance to take my accustomed bath; felt uncomfortable after bathing; did not enjoy the bath.

October 24th. An intolerable itching and tingling of the left nostril in the morning, with *moisture* of the same nostril; return of the itching in the afternoon with *dryness* of same nostril; again in the evening with *moisture.*

October 25th. Sharp pains in umbilical region; appetite increased.

October 26th. *Intense painful pressure in vertex and both temples; the pressure in vertex extending over to occiput; pain so severe as to oblige lying down; intolerable pain over both orbits; cannot bear to raise the lids;* feeling as if something heavy were pressing the brain out; loss of appetite; stiffness of right side of neck; not able to move the head, with a feeling of drawing and tension, which lasted several days; pain under right shoulder-blade (old ailment); dry tickling cough at 6 P.M. (old ailment); all old ailments returned with renewed force; feeling of emptiness in stomach and bowels; sharp pain in forefinger of left hand; pain in dorsum of right hand.

October 27th. Fever blisters in and around left nostril; drawing pain in umbilical region.

PROVING OF PHYSOSTIGMA, 30.

BY H. A. W.

October, 1873. Prover female; tall, thin, of dark complexion; thirty-seven years of age. Took the powder at night on

retiring; woke next morning with a dull frontal headache; by noon the headache involved the whole cerebrum; great fulness of the bloodvessels of the brain; a contracted feeling of the skin of the forehead, which extended to the eyelids, causing an effort to close or open them; at 3 P.M., slight nausea; throbbing of temporal and carotid arteries; spasms of pain at intervals of five and ten minutes, sharp and lancinating, in region of right parietal eminence, lasting one or two minutes, leaving a sore bruised feeling; headache relieved in evening by close attention to a metaphysico-theological sermon, renewed by coming out into open air; sleeplessness before midnight; disturbed sleep after; day following, headache diminished; great aversion to usual cold bath; severe aching in glutei muscles, right side, neither increased nor diminished by walking; third day, headache at times severe, generally a dull, solid feeling; aching in region of and below right scapula; troubled with headache for some weeks after, which was generally relieved during mental application, and aggravated when walking in the air.

Clinical Symptoms.

By Dr. E. M. Hale.

⊗ Tetanic contraction of the head backward, nearly at right angles with the body; existing for several days; relieved in eight hours (four cases occurring in cerebro-spinal meningitis).

⊘ Convulsions in a child, of the nature of opisthotonos, occurring after sudden stoppage of cholera infantum.

⊙ Shaking of the head in elderly persons, with a *drawing* sensation in back of neck.

XLIX.

PROVINGS OF HAMAMELIS VIRGINICA.

(WITCH HAZEL.)

PRESENTED BY WALLACE McGEORGE, M.D., WOODBURY, N. J.

INTRODUCTION.

IT is the duty of every homœopathic physician, while rejoicing in the pure light of truth as to the theory and practice of medicine, while feeling deeply grateful to those who have gone before him, and who at immense personal sacrifice have furnished him with invaluable provings of the various remedies in the Materia Medica, it is his duty, not simply to rest content with what others have done, but, on the contrary, to add to the general fund of knowledge; to make personal sacrifices for the common good; to lend aid and assistance to the ultimation of the truth taught by Hahnemann.

Feeling such to be the case, and being assisted by several colleagues and friends, I selected *Hamamelis Virginica* a few years ago as a subject for proving, believing that there were then, and still are, many virtues latent in this drug which had not been developed by the few provings published or accessible to the great mass of American physicians. These provings were made, or the most of them, during 1867 and 1868, but the provings of Drs. Iszard, Chantler, and Murphy, were made in 1872 and 1873. The majority of them were made by medical students and physicians, under rules laid down by the writer, which were taken down while in attendance upon the lectures delivered by Professor Adolphus Lippe, of Philadelphia.

BOTANICAL DESCRIPTION.

The Hamamelis is indigenous to the United States, deriving its name from the Greek ἅμα, *like to*, and μηλίς, *an apple tree*, anciently applied to the Medlar, or some other tree resembling the apple; but the resemblance is not striking, nor the application obvious. The following description is found in *Flora Cestrica*, order 43:

"HAMAMELACEÆ.—Shrubs; *leaves* alternate, simple; *stipules* deciduous; *calyx* adherent to the base of the ovary; *pistils* two, united at base; *capsule* woody, 2-beaked, opening at summit, 2-celled below; *seeds* bony, 1 in each cell; *embryo* surrounded by fleshy albumen.

"1. *H. Virginica* (Linnæus). Leaves obovate or oval, sinuate, dentate, subcordate at base, stellately pubescent. Virginian Hamamelis, Witch Hazel. *Stems* six to ten or twelve feet high, with straggling flexuose or geniculate branches. *Leaves* four to six inches long; petioles about half an inch in length. *Flowers* greenish-yellow, clustered in threes on a common peduncle, near half an inch long; petals narrow, linear, a little crisped, about three-quarters of an inch in length. *Seed* black and shining. Habitation, moist woods and thickets, frequent. *Flowers*, October. *Fruits*, September, next year."

Other descriptions will be found in *Gray's Manual of Botany*, order 51; in *Green & Congdon's Analytical Class-Book of Botany*, order 56, and in many of the encyclopedias. In *Appleton's New American Encyclopedia*, vol. xvi, page 506, is a very good sketch of Witch Hazel.

"While all the shrubs and trees, itself included, are putting off their summer garb of green, this shrub begins to send forth abundantly, in the midst of sere and falling leaves, its golden yellow blossoms, cheering the desolate woods, in favorable locations and seasons, often until into December."—*Green & Congdon.*

"A shrub of such striking appearance is worthy of cultivation, the more so as it can be propagated from the seeds, which should be sown as they ripen, and the transplanted shrubs would readily grow in moist soil."

The Hamamelis has been put to a variety of uses. Its twigs furnish capital substitutes for "divining rods," with which crafty operators impose upon the credulous; by them, also, adepts in the occult arts pretend to discover water and precious metals under ground. The leaves and twigs are astringent, and its bark likewise contains a peculiar essential oil. The kernels of the nuts are oily and edible. The Indians used the bark as a sedative in local inflammations. The *inner rind* of the bark is said to be efficacious in painful inflammations of the eyes, in the form of a cataplasm. *Pond's Extract*, claimed to be a veritable panacea, is said to be made from the leaves and twigs by distillation in *copper* vessels. This extract no doubt has done a great deal of good, and just as likely a great deal of harm when improperly used. Under that portion of this article styled *Clinical Observations*, will be found some cases and remarks that may prove of service to some readers. By comparing them with the symptoms in the pathogenesis, it will be seen that Hamamelis must cover a wide range, and prove useful to all who study it and prescribe it according to the law of similia.

MEDICINES, WHENCE OBTAINED.

The mother tincture used in these provings, was received from Prof. Lippe, and was distilled by him in *glass* vessels in 1850, from shrubs collected the same winter by him in connection with Professor Baird, now of the Smithsonian Institute at Washington. The 3d, 6th, and 10th potencies were run up on the centesimal scale by the writer; the 200th potency was obtained from A. J. Tafel, in Philadelphia; the medicine used by C. J. Wiltbank was obtained in Baltimore; and the medicines used by Drs. Iszard, Murphy, and Chantler were obtained by the writer of A. J. Tafel, in 1872; the mother tincture referred to in the clinical remarks was also obtained of Tafel.

LIST OF THE PROVERS.

Name.	Abbreviation in Résumé.	Occupation.	Provings.
Wallace McGeorge,	McG.,	Physician,	1st, 2d, 3d.
Samuel Worcester,	S. W.,	"	4th.
Jacob Iszard,	Isz.,	"	5th.
Comly J. Wiltbank,	Wilt.,	"	6th.
Arthur P. Hollett,	Holl ,	"	7th.
C. Horace Evans,	Evans,	"	8th.
Walter M. James,	James,	"	9th.
Clark J Cooper,	Coop.,	"	10th.
Israel B. Chantler,	Chan.,	"	11th.
F. E. Murphy,	Mur.,	"	12th.
Ferdinand W. Wagner,	Wag.,	Merchant,	13th.
Miss Mary McC——,	Miss M.,	Proofreader,	14th.
Mrs. Eliza C——,	Mrs. C.,	"	15th.
Mrs. C. Allen,	Mrs. A.,	Housekeeper,	16th.

First Proving (Mother Tincture).

W. McGeorge, aged 26. Rather under medium height, well built, sanguine temperament, fair hair, blue eyes. In the enjoyment of good health, with the exception of a catarrh in head.

Sept. 30th, 1867. 11 P.M., took one drop on retiring.

Oct. 1st. Experienced a dull feeling in forehead at root of nose, continuing all day; aggravated for a few moments at 11 P.M.; coryza; no desire to work; likes to sit and think, or muse, while awake; less inclination to sleep than usual; slept well all night; stitching in corns on right foot at 10 P.M.

Oct. 2d. Headache the same as yesterday, across forehead, but more particularly over the eyes and at root of nose; discontented all day; unpleasant, fearful dreams; bowels slightly constipated, no passage.

Oct. 3d. Unpleasant dreams at 5 A.M.; uneasy sleep afterwards; dull, stopped up feeling in forehead, over root of nose, continually; pimples behind ear, and on body, very sore upon touch or pressure; pain in corns as soon as boots are put on in morning (rainy day), becoming permanent during the day, occasionally pulsating; tongue clean, but not so red in middle as usual; natural stool to-day, urine clear, saltish; pulse 80 (usually 65 to 70). Evening. Pains not so severe in head; nose less ob-

structed; easily feels tired from standing; less despondency. 12 P.M., one drop.

Oct. 4th. Urging to stool at 7.30 A.M.; sore feeling in pimples on body continues; headache a little better; no dreams; stool slightly covered with mucus.

Oct. 5th. Urging to stool at 7.30 A.M., and in afternoon; vertigo (momentarily) on rising after stooping, after lying down, while reading; coryza continuing; tired, weary feeling in right limb, in which are varicose veins; changing position while sitting affords no relief, slight improvement from placing it on a chair, removed entirely by walking about; nausea and inclination to vomit at 11 P.M.; passed a tough green plug from right nostril at 11.45 P.M.; tongue clean.

Oct. 6th. Dulness and fulness in head all day; vertigo when stooping or bending forwards; swimming sensation in head at 12 M.; bad smell from nose; tired, weary feeling in right limb (thigh), as if he had walked a long journey, at night; pain particularly in middle and lower third of thigh, and in popliteal space; dilatation of varicose veins.

Oct. 7th. Fulness in head with occasional vertigo continued; still has coryza; for the last four or five days, been hawking up from throat matter which should come from nostrils; varicose veins very sensitive; weary pain in limb (right) more marked, better when moving about; worse when sitting; better from lying down, or placing limb in horizontal position; changing its position while sitting does not relieve; natural stool and urine.

Oct. 8th. Fulness in head; hawks up considerably; weary feeling in thighs; nausea after eating food; has to keep very quiet to prevent vomiting up what has just been eaten.

Oct. 9th. Fulness in forehead; weary feeling in the right limb less marked; qualmishness after eating.

Oct. 10th. Terrible headache all day, probably from sleeping in a close room, not relieved by pressure, riding, walking, or anything, better towards night, disappearing while asleep; very qualmish after eating pork, eructations and a constant dread of vomiting.

Oct. 11th. Headache gone; tongue paler than usual; nausea

after eating in less than half an hour; slight griping after breakfast. 10 P.M., took one drop.

Oct. 12th. Slight headache; qualmish feeling; tendency to vomit after every meal; sleeps well.

Oct. 13th. Headache over nose and eyes.

Oct. 14th. In consequence of severe injuries received from a fall, jarring the whole system and spraining an ankle, took *Arnica*, 200, and discontinued the proving.

Second Proving (200*th Potency*).

Same prover. Having recovered from the effects of injuries received Oct. 14th, and having waited one month for the *Arnica* to expend its action, taking no other medicine in meantime, commenced second proving.

Nov. 14th. Took six pellets just before retiring.

Nov. 15th. Woke up at 7 A.M., with a bursting headache, with vertigo on stooping; headache wearing off toward evening. 9.30 A.M., one hour after eating, nausea and feeling as if he was going to vomit, lasting an hour. Sleep disturbed by dreaming of the business of the day.

Nov. 16th. Slight headache on waking; tired feeling when walking, instep feels strained. 3 P.M., throat begins to feel dry. 4 P.M., throat dryer and slight burning, increasing in extent till midnight; uvula fallen; difficulty in talking.

Nov. 17th. Hoarse on arising; dry feeling remaining, burning feeling almost gone; head feels stopped up; headache in forehead.

Nov. 18th. Headache on rising at 7 A.M.; sneezing spell, and running of water from nose; cold in head.

Nov. 19th. Running from nose; caught a fresh cold in the evening; slight headache; discharge from nose acrid and burning, excoriating; felt very chilly on going to bed, and dreaded an attack of fever.

Nov. 20th. Seminal emission during night without being aware of it or amorous dreams; dreamt there was a bat flying in the room, with fear of bodily injury therefrom. Nose fills up readily; discharge excoriating; septum swollen and painful to touch; herpes on lower part of nose; easily takes cold; being

exposed for a moment causes him to take a fresh cold; cold feeling creeping over body upon standing a moment in open air; chill runs up legs, head stopped up, dull pain over orbits; headache better outdoors; pulse 78, irregular in beat, full and hard, then soft, almost imperceptible; easily becomes tired. Took six pellets at 9 A.M.

Nov. 21st. Took cold again from being exposed for a moment to a draft without a hat on; nose swollen and inflamed; still painful to the touch, but not so much so as yesterday; tired feeling in right limb appearing as before; forcing feeling in varicose veins at 6 P.M.; slight headache continually present in forehead, but not observed so much while outdoors, or busily engaged; indisposed to exercise, but studying is not disagreeable; pulse 78.

Nov. 22d. Bursting headache upon waking, insupportable on bending downward; nose less inflamed; herpes disappearing towards evening; swelling of eyeballs and eyelids, with bloodshot appearance of right eye; blue margin at inner canthus of eyes; tired feeling in right arm and leg.

Nov. 23d. Headache on rising; eyes still protrude, but right eye not so congested; dull color of sclerotica; painful weakness of eyes; blue margin round eyes; herpes disappeared from nose.

Nov. 24th. Headache and fresh cold; eyes feel weak, but are less inflamed; nose less painful to touch; gums bleed easily; itching on inferior extremities when undressing.

Nov. 25th. Headache; swelling of and pain in nose all gone; peculiar sensation in varices; sleeps uneasily, wakes up continually from thinking of business of day, turning over in bed to get relief; wants to sleep, but cannot, on account of thoughts pressing on him; unrefreshed feeling when awaking.

Nov. 26th. Headache; dull feeling when awaking; coryza from nose still; disposition to take cold easily; over-sensitiveness of smell; quick perception of anything out of shape or disproportioned; tired feeling in right leg; varices very sensitive.

Nov. 27th. Headache; tired feeling in right limb.

Nov. 28th. Headache as usual. 8 A.M., pulse 86; 8 P.M., pulse 78; apparent diminution of varicose veins above knee.

Nov. 29th. Pulse 76 at 9.30 A.M; took six pellets at 11 A.M.

Three hours after, headache (which had been very slight all the morning) commenced violently again, continuing all day.

Nov. 30th. Headache. The peculiarity about the headache is, that it is worse in the morning when rising and while indoors, but better while thinking, or reading, or walking, or talking.

Dec. 1st. Slight headache. Been outdoors pretty much all day; feels well and in good spirits.

Dec. 2d. Headache as usual; after eating pork for dinner, nausea, eructations, and violent hiccough; afterwards burning pain in stomach and œsophagus, and two hours after cramp pains in stomach and chest; spasmodic twitching of, first, the right upper eyelid, and two hours after the left upper eyelid; catarrh; headache worse after second sleep in morning.

Dec. 3d. Headache worse after second sleep in morning; eructations two hours after eating; urine and bowels regular; good appetite.

Dec. 4th. Headache; bowels regular.

Dec. 5th. Headache worse after second sleep.

Dec. 6th. Headache; nausea and eructations after dinner; has to remain quiet for two hours, without even reading, to avoid vomiting; even then has eructations and heartburn.

Dec. 7th. Slight headache; nausea after eating; weary feeling in right limb; pulse 76, at 7.30 P.M.

Dec. 8th. Nausea and eructations after eating; pulse 60, and full, in evening.

Dec. 9th. Pulsations in rectum when lying in a half recumbent position; pulse 60 in morning, 66 in evening; shooting pain in mastoid portion of temporal bone when walking in the wind; eructations three or four hours after meals at night; sleeps well; slight headache.

Dec. 10th. Slight headache in morning; pulse 56, 60, 62, in morning; herpes on nose in afternoon, disappearing in evening; pain in mastoid process, in afternoon and evening, when first going out in the wind, lasting a few minutes; appetite good; food tastes natural; eructations in evening; pulse 76 in evening, full, occasionally becoming weaker. Took another dose.

Dec. 11th. Headache in afternoon; slight sensation in mastoid process.

Dec. 12th. Headache in morning; cramps in stomach and transverse colon for a few minutes; two hours after, a hearty dinner, but eating no unusual food; unusual taste of eructations in morning; bowels regular; urine clear and natural; good appetite.

Discontinued proving the 200th potency.

Third Proving (*10th Potency*).

Same prover. Took one drop on tongue, December 12th, in the evening before retiring.

Dec. 13th. Pain in mastoid portion of temporal bone in morning; violent hiccough at 6 P.M., four hours after eating; 9 P.M., dry feeling in throat. Took one drop.

Dec. 14th. Slight headache; eructations tasting of what had been eaten; dry feeling in throat (momentarily relieved by cold water), in the evening, more severe than yesterday; scalding sensation on tongue, just beyond the tip, continuing until retiring; tired feeling in both limbs from hips down to feet; inability to run fast; excessively sore finger, from which a small piece of skin was rubbed. Took one drop.

Dec. 15th. Woke up with a severe headache; pressing in frontal bone, the only part affected, continuing unabated all day; scalding sensation on tongue still remaining; slight griping in umbilical region just before dinner; dryness of throat after 8 P.M.; easily becomes fatigued while walking. Took one drop.

Dec. 16. Dryness of throat; tired feeling in inferior extremities; sneezing at 12 M.; eructations after meals. Took one drop.

Dec. 17th. Same symptoms as December 16th.

Dec. 18th. Tired feeling in arms and limbs when walking; sore pain in right thumbnail after slightly hitting it against a table; itching in axilla, more severe in the right; feeling as if vermin were running over body; drowsy feeling two hours after dinner; eructations after tea; headache felt occasionally.

Dec. 19th. Same symptoms as December 18th. Took one drop on tongue before retiring.

Dec. 20th. Headache on rising; peculiar sensation in mastoid portion of temporal bone; eruption of fine pimples all over

body; hands become chapped; the pain in right thumbnail becomes more severe, worse towards night, and exceedingly painful whenever waking up during the night.

Dec. 21st. Hands become more chapped; pimples on body not so sensitive; sensation of vermin over body continuing, also the itching in axilla; headache towards night. Took one drop.

Dec. 22d. Desire to scratch the hands violently on awaking in morning, the itching is so intense, relieved temporarily by rubbing them together, made worse by scratching; pulsations in corns on both feet all day, after paring them in the morning; 10 P.M., slight griping pain in umbilical region of abdomen.

Dec. 23d. On awaking at 6 A.M., irresistible desire to scratch the hands; relieved by rubbing them, and putting them in cold air, but washing them in cold water does not alter the sensation in the least; elevation of the skin between the thumb and forefinger in little pimples, the right hand worse than the left; headache same as before; 7 A.M., griping pains in umbilical region slightly felt; pulse, 56, 58, 62, irregular; sore pain in thumbnail, with sensation as if nail was growing into flesh; slight itching in axilla; 11 P.M., took two drops; immediately afterwards nausea and vertigo, compelling him to lie down to avoid falling.

Dec. 24th. Woke up with a nauseous feeling and severe headache in frontal bone; pulse 62, 64; headache after sleeping in morning; 11 A.M., discharge of pus from under right thumbnail, which relieved the pain in a few minutes; 11 P.M., pulse 60, 62, and full.

Dec. 25th. Headache on rising; bowels and urine regular; 7 P.M., very thirsty, drinking large quantities of water; slight itching on hands.

Dec. 26th. Headache off and on all day; itching of hands; hands are not so rough and uncomfortable; urging to stool, with easy passage of large stool in morning and afternoon; very thirsty at 7 P.M., wanting a great deal of water.

Dec. 27th. Headache after rising; the tongue paler than usual; shooting pain in (left) mastoid portion of temporal bone.

Dec. 28th. Urging to stool at 5.30 and 8 A.M., and 1.30 and 6.30 P.M., with stool at 6 A.M. and 1.30 P.M.; urine clear and copious; tingling in glans penis; headache; very thirsty in after-

noon and evening; taste of what has been eaten rising up to the pharynx three or four hours after eating; the finger from which a small portion of skin was rubbed Dec. 14th, still very sore on touching it; 11 P.M., cramp pains in chest; pulse 60; every 5th, 6th or 7th beat a little faster and stronger.

Dec. 29th. Arose at 8.30 A.M., with the old bursting headache in forehead and over eyes, and an empty, gone feeling at pit of stomach; pulse 60; feeling as if both eyes would be forced out of head; relieved by pressing them in with fingers, but worse for a few moments after removing pressure; blue margins under both eyes; more under right; nose feels stopped up; headache wears off towards night; tingling in foot while counting femoral (artery) pulse; limbs easily go to sleep in afternoon.

Dec. 30th. Headache; frequent urination during the day; very thirsty in evening; the feeling as if both eyes would be forced out disappearing during the day.

Dec. 31st. Bad headache; pulsations in glans penis felt several times in course of day; frequent urination; urging to stool.

Jan. 1st. Bad headache all day; nausea after eating; must keep quiet after eating; spasmodic eructations and hiccoughs.

Jan. 2d. Headache; feet go to sleep easily while out driving in the cold wind.

Jan. 3d. Headache on waking; cramp pains in umbilical region, continuing a short time after rising; stitches in chest for a few minutes occasionally; pulsations in rectum, as if piles would protrude; 10 P.M., extreme pulsations in corns on left toes; bad headache; tired, weary feeling in arms; spasmodic movements of diaphragm.

Jan. 4th. Headache; uneasy sleep in morning.

Jan. 5th. Headache; uneasy sleep in morning; stitches in chest; pain in abdomen morning and evening; stiffness of arms and shoulders after horseback riding.

Jan. 6th. Headache; pulsations in corns in evening; nausea after eating; stiffness in arms and shoulders.

Jan. 7th. Bad headache on rising; uncomfortable sleep in morning; tossing and turning continually; seminal emission without erection, with consciousness; pulse 60 at 8 A.M.; itching at anus; stitching in glans penis; can count beats of heart by

lying still, and feel pulsations through ball of fingers very distinctly; frequent eructations, lasting some time; stiffness in arms and shoulders wearing away; feel rather stiff in upper part of thighs; thirst in evening; pulse 68 at 10 P.M.

Jan. 8th. Headache; 8 A.M., pulse 62; feeling as of vermin all over hairy parts of body; eructations; disagreeable sensations in pharynx and œsophagus, extending to stomach, with feeling of distress; evening, pulse 68.

Jan. 9th. Headache on rising; pulsations in rectum and penis plainly felt, and synchronous with radial pulse; pimples on nates are very sore upon touch; itching all over the body when undressing.

Jan. 10th. On retiring, Jan. 9th, had an erection without desire; but on awakening in morning discovered he had an emission.

Jan. 11th. Took another cold, which aggravated the old headache; for the past week his gum has been very sore and painful from the pushing through of last molar tooth on lower right jaw, which had stopped, apparently, for some time, without making any headway; feeling as if vermin were on hairy parts.

Jan. 12th. Head very much stopped up.

Jan. 13th. Cramp pain in umbilical region.

Jan. 14th. Headache as usual.

Fourth Proving. Worcester (200th Potency).

Samuel Worcester, M.D., aged 21; light-brown hair, curly; blue eyes; nervous, sanguine temperament; light complexion; 5 feet 11 inches in height; weighs 119 pounds. Is a physician by profession, in an hospital for the insane, and at the present time in perfect health.

Nov. 12th, 1867. Weather damp and rainy; at 3.30 P.M. dissolved six pellets on tongue, of the 200th potency, received from Wallace McGeorge, of Philadelphia; retired at 10.30 P.M.

Nov. 13th. Rest quite uneasy during the night; dreams quite vivid towards morning, unusual, and on waking had a slight catarrh; nasal passages much obstructed, with some soreness of nose; a tenderness of right biceps, increased by pressure.

Nov. 24th. The symptoms gradually passed off, and to-day, at 6.30 P.M., took six pellets.

Nov. 25th. On rising had considerable obstruction of the nasal passages, but no mucus was raised; seminal emission in night, but not conscious of the fact at the time.

Nov. 26th. Cold increasing; other medicines were taken and proving discontinued.

Dec. 8th. At 9 P.M. took six pellets.

Dec. 9th. Arose at 6.30 A.M., feeling bright and cheerful; slept well during the night; some coryza; nasal passages almost entirely obstructed; bowels regular.

Dec. 10th. Cold continues; headache (unusual) towards evening, with dull throbbing pain over left eye.

Dec. 11th. The same symptoms as yesterday.

Dec. 12th. Cold as before; in evening a great deal of flatulence was observed, with tenderness of the abdomen, not increased by pressure; during the day dryness of fauces, with increased thirst, and corresponding desire to urinate; bowels regular.

Dec. 13th. On rising had headache, and felt much depressed; dryness of the lips and slight itching of the anus; during the afternoon and evening a constant desire to evacuate the bowels, together with peculiar sensations around the anus, as in piles; bowels regular, and stools natural. Took six globules on retiring.

Dec. 14th. Slept well; cold about the same; dryness of lips and fauces well marked; felt dull and listless, especially in afternoon; disinclination to study; considerable thirst; about 5 P.M. a dull, burning pain felt in and around the right ear, relieved by pressure; bowels regular; in afternoon a feeling as if obliged to evacuate the bowels (similar to December 13th), but on endeavoring to have a passage was unsuccessful. At 9 P.M., a dull throbbing pain was felt in back and top of head, lasting half an hour; took medicine as before and went to bed.

Dec. 15th. Was unable to sleep for over an hour last night, but having fallen asleep, rested well until morning; dryness of lips has continued, but that of fauces has diminished; some cough, but no phlegm; no hoarseness; some feverishness

in forenoon, also headache; tongue and eyes appear natural, but tongue is perhaps paler than usual. At 1.30 P.M., a stinging pain in left cheek was felt for a few moments; thirst increased, but not satisfied by drink; appetite good; a sense of constriction across the chest, increased by taking a long breath or breathing rapidly. At 2 P.M., pulse 96 and full. In evening less thirst; throat slightly sore; tonsils swollen and inflamed, the left more than the right; canker-spots near end of tongue. At 10 P.M., pulse 80; operation at this time rather costive; headache from straining at stool, with sense of fulness in head, continuing till bedtime. Took six pellets at 10.30 and retired.

Dec. 16th. Rose at 6.30 A.M.; nasal passages greatly obstructed; little appetite at breakfast, but drank large quantities of water. At 8 A.M., tonsils swollen, but not so red as last night; papillæ on tongue much enlarged, especially near the root; pulse 88; eyes very painful under slight pressure; itching of right arm increased, with a slight pimple here and there; several fits of sneezing during forenoon, after which the nasal passages seemed less obstructed. At 1 P.M., papillæ more enlarged; mucous membrane of lips much cracked; tonsils swollen enough to cause a slight feeling of rawness on swallowing; weakness of lower limbs; pulse 92; sneezing in afternoon, with eructations of wind. At 8.30 P.M., urging to stool, with much flatulence; pulse 88; bowels rather costive; fæces dark and slimy. (The fact should here be noted that yesterday and to-day, when putting up medicine, a great desire to urinate was felt; but if the prover sat down, or turned his attention to something else, the desire passed away, to return as soon as he again poured out medicine; this occurred every time he poured out medicine, or anything liquid. The desire to urinate, caused by pouring water, should not be attributed to the proving, as the prover was informed that his predecessor experienced the same feeling when dispensing medicine, but the desire was undoubtedly aggravated by the medicine.)

Dec. 16th. 10.30 P.M., pulse 80; left nostril less obstructed than the right; right tonsil more swollen than left. Took six pellets and retired.

Dec. 17th. Catarrh as before; appetite fair; thirst great;

pulse at 8 A.M., 96; tongue coated with brownish-white mucus; tonsils much reddened, and veins and vessels on surface enlarged; several spots as of ulceration on left tonsil; feeling of fulness in left ear; some cough. Headache in afternoon, with pain in both ears; operation at 9 P.M., costive; fæces dark; 10 P.M., pain through temples and heaviness of eyes; buzzing in ears; lips sore; soreness of gums of upper jaw, and sense of constriction across forehead; pulse 80. Took six pellets and retired.

Dec. 18th. Rose at 7 A.M.; headache; appetite fair; throat dry, rendering it necessary to drink large quantities of water to assist in deglutition. At 8 A.M., pulse 92; lips sore; tongue as before; left nostril less obstructed than the right; swelling of upper lip where the left nostril joins it. At 1 P.M., pulse 72; feeling of lassitude in afternoon. 10 P.M., pulse 76; general feeling unwell; headache in front and top of head; slight pain on swallowing; bowels regular. Took six pellets and retired.

Dec. 19th. Dull and spiritless all day; raised some mucus from throat; eyes heavy; great thirst; lips and gums very sore. At 8 P.M., pulse 76 and full; very severe headache indeed, feeling as if the head would burst; ringing in ears, and eyes very painful; desire to vomit. Omitted the medicine this evening, and retired at 10.30 P.M.

Dec. 20th. Slept well until about 4 A.M., when he had short, light naps until 6.30 A.M., when he arose. Very painful canker-sore at median line of upper jaw where the lips join it. Headache and cold as usual during the day; bowels regular; at 10 P.M., pulse 80 and full. Took six pellets and retired.

Dec. 21st. Felt tolerably well during forenoon; in afternoon very severe headache; feverishness; tongue coated, and a "brassy" taste in mouth; catarrh as before; general "stuffed" feeling in head; desire to vomit; pulse at 10 P.M., 72; eyes very heavy and painful, tender on pressure.

Dec. 22d. Slept heavily; intense headache on rising; eyes heavy; pulse 88; feverish; tongue coated white. Dull and depressed all day; eyes very painful; headache all day, increased by stooping; pain in right molar teeth of upper jaw; weakness of limbs; at 9 P.M., pulse 84 and full; weariness of right arm;

lips dry and cracked; gums sore and swollen; fauces dry and inflamed; tongue clean and pale; slight vertigo towards night.

Dec. 23d. The swelling near the nose of left side, or rather of lip under left nostril, has come out in the form of pimples, and proves to be herpes, but it is not on the left side. Seven or eight pimples, watery, or a yellowish-white secretion, first appeared on December 18th in form of swelling of the upper lip. No more medicine was taken, and the symptoms were not noted until December 28th. The following sequelæ were observed:

Dec. 28th. Rose at 6.30 A.M., feeling tired, no appetite for breakfast; considerable thirst, but relieved by drinking small quantities of water; headache of a throbbing nature; bowels rather costive; great desire to urinate; some phlegm raised in morning; nasal passages less obstructed; herpes improved; tongue coated slightly with a whitish fur; no soreness of throat; tonsils normal; epiglottis lengthened; eyes painful, and pain increased by pressure. For several days have noticed a peculiar spasmodic thrill in left upper eyelid, similar to that felt when winking rapidly; 1 P.M., pulse 84, at 10 P.M., 80.

Dec. 29th. Rose feeling dull, no appetite at breakfast; headache during forenoon; in afternoon weakness of knees, headache increased, and at night is quite severe, chiefly in forehead; in evening the right ear is obstructed so that the prover can hardly hear by it, also a burning in right cheek; throat sore; pulse at 10 P.M., 70; throat and tongue reddened, but flabby; peculiar feeling in eyelid continues; epiglottis relaxed so as to irritate the tongue.

Dec. 30th. In morning no appetite; felt dull; deafness in right ear, passing off by noon; throat still sore; great dryness of throat and lips; headache chiefly in front of head; weakness of knee (formerly affected by rheumatism) in afternoon; a sharp pain going from one temple to the other; pulse at 10 P.M., 76.

Jan. 1st, 1868. Herpes nearly gone; throat less sore, some headache; itching of limbs, felt from the beginning of proving, much better; a slight vertigo in afternoon on stooping, but it quickly passed; pulse at 10 P.M., 76.

January 2d. Appetite improved; no cough nor soreness of

throat; headache towards night; in afternoon a burning pain felt in right cheek, lasting five or six minutes.

January 3d. Much better; appearance of throat normal; herpes disappeared; slight feverishness at night.

January 4th. Nasal passages more obstructed; some cough; eyes painful; pulse 80 at 10 P.M.

January 5th and 6th. No special symptoms to record; itching nearly gone; no cough; no headache.

January 7th. Feeling better; in forenoon felt a sharp pain across the forehead; eyes still somewhat painful; bowels normal; appetite improved; thrill in eyelid gone.

January 8th, 9 A.M. Very great dryness of lips; pulse 88 and wiry. Proving concluded.

Fifth Proving (Mother Tincture).

Jacob Iszard, M.D. In good health; tongue clean; good appetite; sleep well; weight 150 pounds.

November 1st, 1873. Took five drops of the mother tincture. At 10 o'clock A.M., felt dull headache; pain in the right lung. Took five drops at 12 o'clock noon; felt a dulness and was somewhat stupid. At 7 o'clock P.M., took six drops; increasing headache; some burning of the right ear; rawness in the throat and fauces; had no desire to study or read; sleep was somewhat disturbed; increased urination; urine pale.

November 2d. Took five drops at 12 o'clock noon; felt shooting pains running down the forearm along the flexor muscles into the palm of right hand; dull headache; dimness before the eyes; could not sleep well; urination profuse; urine pale; erection, but no emission.

November 3d. Took ten drops at 9 o'clock A.M. Dulness in the head; some pain in the right lung; rawness in the throat; did not sleep well at night.

November 4th. Did not take any medicine. Tongue coated white in the morning; bad taste in the mouth; still had dull headache, and occasionally shooting pain along the right superior maxillary, extending up to the malar bone; pain and full feeling at the root of nose.

November 5th. Did not take any medicine. Had my teeth examined by a dentist; he could not find any decayed, or gums inflamed; could scarcely sleep at night; heard the town clock strike nearly every hour through the night; some pain running down the spermatic cords into the testes; the scrotum perspired freely through the night; had an erection; no seminal emission.

November 6th. Did not take any medicine. Had a sharp lancinating pain along the molar teeth, extending up to the malar bone, also into the region of the temporal; stitching pain along the left sciatic nerve; some pain in the left knee; sharp pains in the corns of the toes; feeling as if vermin were crawling along the edges of the hair; had a pain, about 4 P.M., back of the stomach along the spinal column.

November 7th. Did not take any medicine. Had pain along my teeth on the right side; I became impatient, and resolved not to take any more of the medicine; felt as if I did not care whether I attended to my practice or not; did not want anybody to call at the office for medicine.

November 8th. Itching in left ear and over the body under the clothing; stitching pain in left hip and under left patella while walking; face feeling better; slept better at night.

November 9th. Head feeling clear to-day; face nearly relieved from pain, but some soreness about the upper wisdom tooth of the right side.

November 10th. Head feeling clear to-day; throat feeling better of the rawness; sleep well at night; did not pass water through the night.

November 5th. Gave my son, aged 13, three drops of the tincture at 12 o'clock noon. It gave him a dull headache, lasting about an hour; rawness of the fauces; he declared he had a sore throat, and wanted me to treat it with other medicines; I let it alone. The next day the throat was better, but he had a severe pain in the right great toe.

November 6th. Gave my daughter, aged 11, one drop of the tincture. Immediately she had a feeling of rawness in the fauces; dull headache across the frontal bone; could not read or study; had a sudden pain in the right great toe while running, which she never felt before.

Sixth Proving (*3d, 6th, and 12th Potency*).

C. J. Wiltbank, aged 27; light hair; brown eyes; sanguine temperament; weight 145 lb.; height 5 feet 9½ inches; enjoying good health.

July 2d, 1867. Commenced the proving with the 6th potency, with the following result:

July 4th. Bruised feeling in upper arms and shoulder, worse from motion.

July 5th. Pain in shoulder and upper arms continues, but not so violently, accompanied with drowsiness; feels gloomy; perspired freely at night after lying down.

July 6th. No new symptoms, except great restlessness; could not keep quiet, although motion makes him feel worse.

July 7th. No new symptoms.

July 8th, 9th, 10th, 11th, and 12th. The same.

July 13th. Marked weakness of memory; if he reads cannot remember important things he has been reading about.

July 14th. Bruised feeling in arms and shoulders has entirely vanished, but appeared to have descended into the lower extremities; left leg more painful than right; severe headache; slight fever; pulse accelerated.

July 15th. No new symptoms; headache has disappeared; fever still remains; pulse the same.

July 16th, 17th, 18th, and 19th. No new symptoms.

July 20th. Felt better; all former symptoms have disappeared. The remedy was allowed to act till August 1st, without manifesting any new symptoms.

August 2d. Took a dose of 3d potency, with the following results:

August 4th. Great desire to urinate, but pass but little water; it comes away in drops; violent pain in back of right hand, extending to the shoulder-joint.

August 5th. Had an emission last night; felt weak and giddy on rising; bowels costive; great desire for an embrace.

August 6th. Pain in hand has left; aversion to water; makes him sick to think of it.

August 7th, 8th, 9th, 10th, 11th, and 12th. No new symptoms.

August 13th. Two emissions last night, with an incessant desire for an embrace; erections quite frequent; continues all day off and on; wish to be alone; drowsiness; cannot settle mind on study; pain in occiput.

August 14th. Another emission last night.

August 15th. No new symptoms; feel better; no pain in head nor emission; erections continue, but not so frequent.

August 16th. No new symptoms; all the others seem to have gone, excepting erections, and inability to settle his mind.

August 17th, 18th, and 19th. No new symptoms.

August 20th. All the former symptoms have left, excepting mental condition, which remains unaltered.

August 21st, 22d, and 23d. No new symptoms.

August 24th. Still find it difficult to settle his mind; angry mood; nothing seems to suit him.

August 25th, 26th, 27th, 28th, 29th, 30th, 31st. No new symptoms; they have all disappeared excepting the mental condition, which still continues.

September 1st, 2d, 3d, 4th, 5th. No new symptoms.

September 6th. Took a dose of the 12th potency.

September 10th to 20th. A reappearance of all the former symptoms, but in a milder form. Was afraid to risk another dose, his mind was in a fearful condition. The nocturnal emission causes his face to break out in pimples, and to feel badly; he felt wretchedly. Took cantharis, afterward pulsatilla.

Seventh Proving (Mother Tincture).

A. P. Hollett, aged 23. Black hair and eyes; phlegmatic temperament; medium height and build. Health generally good, with the exception of some derangement of the bowels and a tendency to constipation. Student.

October 1st, 1867. Took two drops at 10 P.M.

October 2d, 9 A.M. Flashes of chilliness over the back and hips, extending down the extremities; dull, stupefying headache over eyes and root of nose. 3 P.M. General lassitude and feeling of weariness; limbs ache, with quite a tendency to go to

sleep; irritable disposition; flow of large quantities of urine, with frequent desire to urinate; headache all day.

October 3d. Symptoms all aggravated; unable to study or read. Discontinued the remedy, and took an antidote.

Eighth Proving (Mother Tincture).

C. H. Evans, aged 22. Black hair and eyes; dark complexion; bilious temperament; rather light physique. Student.

October 1st, 1868, evening. Took two drops.

October 2d. Headache in the temples; worse in the morning; thirst towards evening. Slight pain in right side of the neck, along the course of the sterno-cleido-mastoid muscle; worse in the morning and when moving it. Feeling unwell, took some medicine to relieve his symptoms, and discontinued the proving same day, October 3d.

Ninth Proving (Mother Tincture).

W. M. James, aged 19. Dark hair; black eyes; sanguine temperament; tall, heavy build. Student.

October 1st, 1867. Took two drops and retired to bed.

October 2d. Arose at 7.30 A.M. with hoarseness as from a cold; about 10 A.M. throat became slightly sore, causing pain in effort of swallowing, continuing all day and on retiring at 10.30 P.M.

October 3d. Arose at 8.30 A.M. with soreness of throat increased; dryness of throat, with thirst, causing him to drink large quantities of water at short intervals of time.

October 4th. On arising, soreness of throat slightly better, almost entirely disappearing by evening. Took three drops and retired at 10.30 P.M.

October 5th. On arising, found the soreness of throat entirely gone. Seminal emission during the night, without dreams, of which he was unconscious till morning.

October 7th. Seminal emission during the night, without being aware of it until morning. About 12 M. a severe headache was felt over the right eye, of a pressing nature; most intense when sitting or lying quiet; disappearing while walking in the open air.

October 8th. About 6 P.M. felt more thirsty than usual; at 10 P.M. severe headache over right eye, which did not prevent his sleeping soundly. Discontinued observing or recording symptoms at this time.

Same prover; commenced with 200th potency.

November 8th, 1867. Took six pellets on retiring.

November 9th. Headache over right eye at 9 A.M., continuing a few moments and then disappearing. 4 P.M. Fever in the hands, with burning in the eyelids on closing them; great desire to drink water from excessive dryness of throat; discharge of flatulence; general languor, rendering study irksome; inability to concentrate the thoughts upon any subject of study; exceedingly restless and discontented.

November 11th. Seminal emission without sensual dreams during night; a severe stinging and throbbing pain in right molar teeth, experienced before commencing the proving, has been much worse since taking the medicine.

November 12th. Pain in teeth continued; aggravated by going into warm room, or on getting warm in bed; the pain became so intense that he took *Belladonna* 200 to relieve it, without avail; *Pulsatilla* 200 ameliorated the pain. Proving in consequence discontinued.

Tenth Proving (*6th Potency*).

C. J. Cooper, aged 24. Fair hair; blue eyes; sanguine temperament; medium build. One dose.

November 20th, 1867. Took one drop of the 6th potency, on tongue, in evening; two hours after, dulness in the head.

November 21st. Feeling of languor all over body; urinates too often, with continual desire to pass water; sensation as if the brain was swimming around, continuing all day.

November 22d. Sensation as if brain was swimming round on rising.

Eleventh Proving (*3d Potency*).

I. B. Chantler, student of medicine.

November 1st, 1872. At 2 P.M. took 10 drops of the third; at 6 P.M. 15 drops more.

November 2d, 7 A.M. Took 20 drops; at 2 P.M. 20 drops more; during morning had a very severe sore pain in head of right humerus, extending down to elbow-joint, accompanied with slight stiffness at elbow-joint; very severe frontal headache; sensation of heavy weight at back of stomach; sensation as if anterior lobes of brain were too large for cranium; severe sore pain running down thighs, particularly the right; soreness of knee-joint; very cross and easily irritated, not wanting anybody to speak to him.

November 3d. Took no medicine to-day, but some new symptoms appeared; increased desire to smoke; wants to do nothing but smoke and be alone; smoking greatly aggravates all the symptoms, but the desire for smoking is increased, the symptoms of yesterday increasing in severity.

November 4th. Took 20 drops at 6 A.M. The frontal headache is intense, can scarcely stand it; pain in right humerus from shoulder to elbow is very severe; increased stiffness of elbow-joint; forgetfulness, especially of words when talking, so much so that his room-mate thinks him crazy; took 20 drops at 2 P.M.; throat feels very sore; general feeling of languor and depression; heaviness back of stomach increased.

November 5th. At 6 A.M., 10 drops more. Profuse urination, but only little at a time; seems that bladder fills up very quickly; urine light-colored; very sore throat, particularly fauces; every inhalation seems to dry up mucous membrane of throat and fauces; severe pain in region of kidneys when getting up in the morning; sore pain in popliteal spaces; pain now in both humeri; sore pain in right femur, very severe.

November 6th. Dry cough; sometimes expectoration of thick yellowish or greenish-gray mucus; putrid taste; every time he coughs severe stinging pain in uvula, as if it would break off; slight nausea.

November 7th. Terrible frontal headache; worse sitting or standing up, better lying down; very severe sore pain in right mastoid portion of temporal bone; sore pain in eyes; muscles of face feel very sore and stiff; soreness and headache all over the head; rubbing the forehead relieves frontal headache; pressure relieves also; spasmodic contraction of sphincter ani; vertigo, as if

drunk; urine very profuse; notice also in vessel greasy deposit, which sinks to bottom of vessel, rising to top when shaken, looking like laudable pus; urine light in color; no thirst during entire time; can't go to sleep at night, thinks too much; at 10 P.M. took 10 drops more.

November 8th. All symptoms very much increased; cannot go to lectures, feel too sick; fluent coryza, discharge burning and smarting every part it touches; sore pain down the cervical vertebræ; stopped-up condition of head; coryza comes on at 4 P.M. each afternoon; goes away at 10 P.M., not troubled with it in the intervals; symptoms all increased in severity; pain in right humerus intense; stopped taking the "confounded stuff," as his room-mate called it; symptoms increased on the 9th of November, and gradually left, pain in right humerus leaving last; from taking two hundredth potency observed only the pain in humerus, extending down arms to elbow, causing stiffness at that joint; considerable headache, the same as that produced by the third potency; also observed the sensation of heaviness *back* of the stomach, but not so severe as in the former proving; also experienced feelings of languor.

Twelfth Proving (*200th Potency*).

F. E. Murphy, aged 26, occupation teaching; health good; no hereditary tendency or predisposition to disease; reports the following symptoms:

1st. Lancinating pain in left wrist-joint, felt once third day.

2d. Lancinating pain in left knee-joint and left ankle-joint; felt once fifth day.

3d. Dull pain, constant under lower angle of left scapula; felt first on fifteenth day.

4th. Dragging pain, constant in left shoulder-joint.

5th. Rheumatic pain, constant aching in left arm.

6th. Dull aching pain, constant in muscles of left side of chest; at first high up, then lower down, now under the edge of short ribs; this pain aggravated by using the arm much, worse in the afternoon and evening.

7th. Lancinating pain in left frontal region felt once on seventh day.

8th. On eighteenth day headache, dull and heavy, in left parietal region.

9th. On twentieth day and thereafter, headache in whole left side of the head; most severe in parietal region; worse in morning and evening; relieved by eating; twenty-seventh day, pain over left eye.

10th. Sleepiness every afternoon.

11th. No desire to study or read.

12th. Twenty-first day, diarrhœa, lasting two days, probably caused by change of water.

13th. On the twenty-fourth day the pains on the left side ceased and gave place to pleuritic pain on the right side of chest; the pains were severe, but gradually abated, and on the twenty-sixth day were replaced by the pains in left arm and chest.

Thirteenth Proving (*200th Potency*).

F. W. Wagner, aged 28; fair hair; blue eyes; sanguine temperament; medium height; merchant.

November 11th, 1867. Took one dose; unpleasant dreams; health good.

November 12th. Good health; depressed in mind; nocturnal emission and dreams; emission caused by dreams.

November 13th. Good health; regretful in mind for having had emissions at night; they were violent.

November 18th. Another dose; no emission since the 12th; health good; sleeps longer than usual.

November 23d. Slight headache; better at night; intense thinking; unhappy; better in mind and body, 7 P.M.

November 24th. Emission while dreaming; health good; only noticed a pain in right lung, perceptible in deep breathing.

November 27th. Pain almost gone; well in mind and health.

December 15th. Emission at night; health good.

December 20th. Headache; emission; depressed in mind; restless sleep and dreams.

December 22d. Emission; restless and dreams; good health.

December 29th. Emission; earache and stomach disordered; pains from injudicious eating; depressed in mind; during all this time appetite good and health averaging better than usual.

January 30th, 1868. Health excellent; emissions less frequently; have taken none of the medicine since December.

Reports also that his dyspepsia is better (was put upon a plain diet during proving); had never been so well, nor took so few colds in winter before; always had cramp pains in stomach and stitches in lower part of lungs after eating, the day after taking the medicine; when well, would have an emission every five or six weeks; during the proving, oftener than once a week on an average; increased also in weight.

Fourteenth Proving (*200th Potency*).

Miss Mary McC., aged 21. Fair hair; blue eyes; bilious temperament; medium build. Submits the following symptoms in place of a detailed proving.

November 6th, 1867. Commenced proving the remedy. Dose, six pellets, on tongue, in morning, once a week. Symptoms: Invariably produced nausea, headache, and general stupor for two hours after taking the medicine; but afterwards felt clearer and brighter than before using it. Before retiring, had strange dreams, and great restlessness after going to sleep; but, as a general thing, arose more refreshed, and with a clearer mind. The feeling for a short time after taking the remedy was anything but pleasant; but the effects were good; had fewer colds than any winter for a long time; as a general rule is very subject to colds and sore throat, taking cold, which affects the throat upon the least exposure; an eruption on face was much lessened while taking the medicine, and the skin appeared clearer and finer after the proving; an ulcer on the inside of lower lip, which had been there a few weeks before commencing the proving, was unchanged by the remedy, but occasionally bled, and assumed a more bloody appearance during the proving; observed no change whatever in her menses, and was as regular as before.

January 8th. Severe headache; sore throat; worse on the right side; earache, the pain extending even to her finger ends; high fever during the night; eyes feel as though they would melt away.

January 9th, 10th, 11th. Severe pain in the temples; could

scarcely close her eyes; very difficult breathing; when lying down felt a smothering sensation.

January 12th and 13th. Headache gone; feels better, with the exception of her throat, which gives her more trouble in the morning and evening; fever gone; bleeding at the right ear; also bleeding of the nose, which clears her head, and affords her great relief.

January 14th. Improved.

January 15th. Feels decidedly better.

January 16th. Headache in the morning; better at noon.

Fifteenth Proving (*6th Potency*).

Mrs. E. C., aged 31. Dark-brown hair; gray eyes; nervous temperament; small, thin physique; took a single dose.

November 20th, 1867. One drop.

November 21st. Felt dizzy, and sick at her stomach, with a desire to lie down; feeling in head as if she had taken cold. Declined to communicate any other symptoms.

Sixteenth Proving (*Pond's Extract*).

Mrs. C. Allen, aged 58. Light brown hair; gray eyes; bilious temperament; medium height. From using Pond's Extract as a gargle for sore and ulcerated throat, obtained the following symptoms.

October, 1867. Lowness of spirits; dizziness in the head; cold in the head; cramp pains in stomach; violent throbbings in stomach; distension of stomach by wind; gastric troubles; nausea; belchings of wind; hiccoughs; palpitation of heart; acts upon the kidneys more when lying down, compelling her to rise fifteen to thirty minutes afterwards to pass urine in large quantities; pain in the groin; soreness of femoral vessels to middle third of thigh. The extract removes the unpleasant consequences arising from taking cold, when not produced by the medicine.

RÉSUMÉ.

NOTE.—After the symptom, the day or days on which the symptom was observed is given; next the (abbreviated) name of the prover; and last, the potency used in the proving. The Greek θ (theta) stands for the mother tincture; 3d, for 3d potency, 6th for 6th potency, 200th for 200th potency, etc.

Mind and Disposition.

Felt much depressed. 5th day. S. W. 200th.

Depressed in mind. 49th day. Wag. 200th.

Depressed in mind, with headache, and seminal emissions. 40th day. Wag. 200th.

Dull and depressed all day. 15th day. S. W. 200th.

Less despondency, evening. 3d day. McG. θ.

Lowness of spirits. Mrs. A. Pond's Ext.

Feels gloomy. 3d day. Wilt. 6th.

Regretful in mind, for having had emissions at night; they were violent. 3d day. Wag. 200th.

Dull and spiritless all day. 12th day. S. W. 200th.

Unhappy, because he has had seminal emissions. 13th day. Wag. 200th.

Felt dull and listless, especially in the afternoon. 6th day. S. W. 200th.

Discontented all day. 2d day. McG. θ.

Exceedingly restless and discontented. 1st day. James. 200th.

Good health, depressed in mind. 2d day. Wag. 200th.

General feeling of languor and depression. 3d day. Chan. 3d.

General languor, rendering study irksome. 1st day. James. 200th.

Very cross and easily irritated, not wanting any one to speak to him. 1st day. Chan. 3d.

Irritable disposition. 1st day. Holl. θ.

Angry mood; nothing seems to suit him. 23d day. Wilt. 3d.

He became impatient and resolved not to take any more of the medicine; felt as if he did not care whether he attended to his practice or not; did not want anybody to call at the office for medicine. 7th day. Isz. θ.

Wish to be alone. 11th day. Wilt. 3d.

Does not want any one to speak to him. 1st day. Chan. 3d.

Disinclination to study. 6th day. S. W. 200th.

Cannot settle mind on study. 11th day. Wilt. 3d.

Could not read nor study. 1st day. Isz. (daughter). θ.

No desire to study or read. 1st day. Isz. θ.

No desire to study or read. Mur. 200th.

No desire to work, likes to sit and muse, and think while awake. 1st day. McG. θ.

Cannot attend lectures, feels too sick. 7th day. Chan. 3d.

Unable to study or read. 2d day. Holl. θ.

Still find it difficult to settle mind. 22d day. Wilt. 3d.

Inability to concentrate the thoughts upon any subject of study. 1st day. James. 200th.

Inability to settle his mind, with erections of penis. 14th day. Wilt. 3d.

All the former symptoms have left, excepting mental condition, which remains unaltered. 18th day. Wilt. 3d.

Thinks too much, keeping him awake at night. 6th day. Chan. 3d.

Intense thinking, unhappy. 13th day. Wag. 200th.

Sensorium.

Marked weakness of memory; if he reads, cannot remember important things he has been reading about. 11th day. Wilt. 6th.

Forgetfulness, especially of words when talking, so much so that his room-mate thinks him crazy. 3d day. Chan. 3d.

Forgetfulness. 3d day. Chan. 3d.

Dull feeling when awaking. 12th day. McG. 200th.

Felt dull. 22d day. S. W. 200th.

Invariably produced general stupor for two hours, but afterwards felt clearer and brighter than before. Miss McC. 200th.

Dulness and somewhat stupid. 1st day. Isz. θ.

Weak and giddy on rising. 3d day. Wilt. 3d.

Nausea and vertigo, compelling him to lie down to avoid falling, immediately after taking a dose. 10th day. McG. 10th.

Vertigo as if drunk. 6th day. Chan. 3d.

Sensation as if the brain was swimming around, continuing all day. 2d day. Coop. 6th.

Sensation as if brain was swimming round, on rising. 3d day. Coop. 6th.

Swimming sensation in head at 12 M. 6th day. McG. θ.

Vertigo (momentarily), on rising after stooping, after lying down, while reading. 5th day. McG. θ.

Vertigo when stooping or bending forwards. 6th day. McG. θ.

Slight vertigo towards night. 15th day. S. W. 200th.

A slight vertigo in afternoon on stooping, but it quickly passed. 24th day. S. W. 200th.

Dizziness in the head. Mrs. A. Pond's Ext.

Felt dizzy, and sick at her stomach, with a desire to lie down. 1st day. Mrs. C. 6th.

Head and Scalp.

Sensation as if anterior lobes of brain were too large for cranium. 1st day. Chan. 3d.

Bad headache. 18th and 21st days. McG. 10th.

Bad headache all day. 19th day. McG. 10th.

Bursting headache upon waking, insupportable on bending downward. 8th day. McG. 200th.

Severe headache. 12th day. Wilt. 6th.

Severe headache. 3d day. Miss M. 200th.

Severe headache over right eye at 10 P.M. which did not prevent his sleeping soundly. 6th day. James. θ.

Very severe headache indeed, feeling as if the head would burst. 12th day. S. W. 200th.

Woke up with a severe headache, pressing in frontal bone, the only part affected, continuing unabated all day. 3d day. McG. 10th.

Terrible headache all day, probably from sleeping in a close room, not relieved by pressure, riding, walking, or anything; better towards night, disappearing while asleep. 10th day. McG. θ.

Felt tolerably well during forenoon; in afternoon very severe headache, feverishness, tongue coated, and a "brassy" taste in mouth. 14th day. S. W. 200th.

Headache. The peculiarity about the headache is that it is worse in the morning when rising and while indoors, but better while thinking, or reading, or walking, or talking. 16th day. McG. 200th.

Dull headache at 10 A.M. 1st day. Isz. θ.

Dull headache. 2d day. Isz. θ.

Dulness in the head. 3d day. Isz. θ.

Dull headache lasting an hour. 1st day. Isz. (son). θ.

Dull headache across frontal bone. 1st day. Isz. (daughter). θ.

Dull headache, and occasionally shooting pain along the right superior maxillary, extending up to malar bone. 4th day. Isz. θ.

Dulness and fulness in head all day. 6th day. McG. θ.

Dull and heavy headache in left parietal region. 18th day. Mur. 200th.

Two hours after taking medicine dulness in the head. 1st day. Coop. 6th.

Dull, stupefying headache over eyes and root of nose, 3 P.M. 1st day. Holl. θ.

Slight headache. 12th day. McG. *0.*

Slight headache. 2d day. McG. 10th.

Slight headache on waking. 2d day. McG. 200th.

Slight headache continually present in forehead, but not observed so much while outdoors, or busily engaged. 7th day. McG. 200th.

Slight headache in morning. 26th day. McG. 200th.

Slight headache. 5th, 17th, 23d, and 25th days. McG. 200th.

Slight headache, better at night, better in mind and body, 7 P.M. 13th day. Wag. 200th.

Headache, which had been slight all the morning, commenced violently again at 12.30 P.M., continuing all day. 15th day. McG. 200th.

Headache felt occasionally. 6th day. McG. 10th.

Headache of a throbbing nature. 20th day. S. W. 200th.

Headache in morning. 28th day. McG. 200th.

Headache in the morning, better at noon. 11th day. Miss M. 200th.

Headache in forenoon, with feverishness. 7th day. S. W. 200th.

Headache during forenoon. 21st day. S. W. 200th.

Headache in afternoon. 27th day. McG. 200th.

Headache in afternoon, with pain in both ears. 10th day. S. W. 200th.

Headache increased in afternoon, and at night is quite severe, chiefly in forehead. 21st day. S. W. 200th.

Increasing headache, in evening. 1st day. Isz. *0.*

Headache wears off towards night. 16th day. McG. 10th.

Headache towards night. 8th day. McG. 10th.

Headache towards night. 25th day. S. W. 200th.

Pains not so severe in head, evening. 3d day. McG. *0.*

Headache all day. 1st day. Holl. *0.*

Headache off and on all day. 13th day. McG. 10th.

Headache all day, increased by stooping. 15th day. S. W. 200th.

Headache better outdoors. 6th day. McG. 200th.

Headache. 10th, 15th, 16th, 20th, 22d, 23d, and 25th days. McG. 10th.

Headache. 11th, 12th, 13th, 14th, 18th, 22d, and 24th days. McG. 200th.

Headache. 11th and 24th days. S. W. 200th.

Headache on rising. 4th and 9th days. McG. 200th.

On rising, headache, and felt much depressed. 5th day. S. W. 200th.

Headache on rising. 7th, 12th, 14th, 21st, and 26th days. McG. 10th.

Bad headache on rising. 24th day. McG. 10th.

Intense headache on rising. 15th day. S. W. 200th.

Headache after sleeping in morning. 11th day. McG. 10th.

Headache worse after second sleep. 18th, 19th, and 21st days. McG. 200th.

Headache and fresh cold. 10th day. McG. 200th.

Headache and cold as usual during the day. 13th day. S. W. 200th.

Another cold I took aggravated the old headache. 27th day. McG. 10th.

Feeling in head as if she had taken cold. 1st day. Mrs. E. 6th.

Cold in head. 4th day. McG. 200th.

Cold in the head. Mrs. A. Pond's Ext.

Cold continues, headache (unusual) towards evening, with dull, throbbing pain over left eye. 2d day. S. W. 200th.

Headache, feverishness, tongue coated, with "brassy" taste in mouth, in afternoon. 14th day. S. W. 200th.

Considerable headache, the same as that produced by the 3d potency, but less severe. Chan. 200th.

Headache from straining at stool, with sense of fulness in head, continuing till bedtime. 7th day. S. W. 200th.

Headache has disappeared. 13th day. Wilt. 6th.

Head feeling clear to-day. 9th day. Isz. *0.*

Invariably produced headache for two hours after taking it, but afterwards felt better. Miss M. 200th.

Headache, emission, depressed in mind, restless sleep, and dreams. 40th day. Wag. 200th.

Headache gone; feels better, with the exception of her throat, which gives her more trouble in the morning and evening; fever gone. 7th, 8th, and 9th days. Miss M. 200th.

Dull feeling in forehead at root of nose, continuing all day, aggravated for a few moments at 11 P.M. 1st day. McG. *0.*

Headache about the same as yesterday, across forehead, but more particularly over the eyes and at root of nose. 2d day. McG. *0.*

Headache in forehead. 3d day. McG. 200th.

Fulness in head, with occasional vertigo, continued. 7th day. McG. *0.*

Fulness in forehead. 8th and 9th days. McG. *0.*

Headache over nose and eyes. 13th day. McG. *0.*

Dull, stopped-up feeling in forehead, over root of nose, continually. 3d day. McG. *0.*

Head feels stopped up. 3d day. McG. 200th.

Head very much stopped up. 28th day. McG. 10th.

General "stuffed" feeling in head. 14th day. S. W. 200th.

Stopped-up condition of head. 7th day. Chan. 3d.

Headache chiefly in front of head. 22d day. S.W. 200th.

Arose at 8.30 A.M., with the old bursting headache in forehead and over eyes, and an empty, gone feeling at pit of stomach. 16th day. McG. 10th.

Head stopped up, dull pain over orbits, with cold feeling creeping over body upon standing a moment in open air. 6th day. McG. 200th.

Sensation of constriction across forehead. 10th day. S. W. 200th.

A sharp pain across the forehead; eyes still somewhat painful. 30th day. S. W. 200th.

Very severe frontal headache. 1st day. Chan. 3d.

Intense frontal headache; can scarcely stand it. 3d day. Chan. 3d.

Terrible frontal headache, worse sitting or standing, better when lying down. 6th day. Chan. 3d.

Soreness and headache all over head; rubbing the forehead relieves frontal headache; pressure also relieves. 6th day. Chan. 3d.

Lancinating pain in left frontal region. 7th day. Mur. 200th.

Headache in front and top of head. 11th day. S. W. 200th.

About 12 M. a severe headache was felt over the right eye, of a pressing nature, most intense when sitting or lying quiet, disappearing while walking in the open air. 5th day. James. *0.*

Headache over right eye at 9 A.M., continuing a few moments, and then disappearing. 1st day. James. 200th.

Sharp pain going from one temple to the other. 22d day. S. W. 200th.

Pain through temples, and heaviness of eyes, 10 P.M. 10th day. S. W. 200th.

Headache in the temples, worse in the morning. 1st day. Evans. *0.*

Severe pain in the temples; could scarcely close her eyes. 4th–6th days. Miss M. 200th.

Headache in whole left side of head; most severe in parietal region; worse in morning and evening; relieved by eating. 20th day, and thereafter. Mur. 200th.

At 9 P.M. a dull, throbbing pain in back and top of head, lasting half an hour. 6th day. S. W. 200th.

Pain in occiput. 11th day. Wilt. 3d.

Slight sensation in mastoid process. 27th day. McG. 200th.

Peculiar sensation in mastoid portion of temporal bone. 7th day. McG. 10th.

Pain in mastoid portion of temporal bone in morning. 1st day. McG. 10th.

Pain in mastoid process in afternoon and evening when first going out in the wind, lasting a few minutes. 26th day. McG. 200th.

Shooting pain in mastoid portion of temporal bone when walking in the wind. 25th day. McG. 200th.

Very severe, sore pain in right mastoid portion of temporal bone. 6th day. Chan. 3d.

Shooting pain in (left) mastoid portion of temporal bone. 14th day. McG. 10th.

Eyes.

Eyes very painful under slight pressure. 8th day. S. W. 200th.

Eyes painful, and pain increased by pressure. 20th day. S. W. 200th.

Eyes painful. 12th, 15th, and 26th days. S. W. 200th.

Pain over left eye. 27th day. Mur. 200th.

Sore pain in eyes. 6th day. Chan. 3d.

Eyes heavy. 12th and 15th days. S. W. 200th.

Eyes very heavy and painful; tender on pressure. 14th day. S. W. 200th.

Heaviness of eyes, and pain through temples. 10th day. S. W. 200th.

Feeling as if both eyes would be forced out of head, relieved by pressing them in with fingers, but worse for a few moments after removing pressure. 16th day. McG. 10th.

The feeling as if both eyes would be forced out, disappearing during the day. 17th day. McG. 10th.

Eyes still protrude, but right eye not so congested. 9th day. McG. 200th.

Eyes feel as though they would melt away. 3d day. Miss M. 200th.

Dimness before the eyes. 2d day. Isz. *θ*.

Quick perception of anything out of shape or disproportioned. 12th day. McG. 200th.

Painful weakness of eyes. 9th day. McG. 200th.

Eyes feel weak, but are less inflamed. 10th day. McG. 200th.

Dull color of sclerotica. 9th day. McG. 200th.

Blue margin at inner canthus of eyes. 8th day. McG. 200th.

Blue margin around eyes. 9th day. McG. 200th.

Blue margins under both eyes; more under right. 16th day. McG. 10th.

Burning in the eyelids on closing them, with fever in the hands. 1st day. James. 200th.

Swelling of eyeballs and eyelids, with bloodshot appearance of right eye. 8th day. McG. 200th.

Spasmodic twitching of first the right upper eyelid, and two hours afterwards, the left upper eyelid. 18th day. McG. 200th.

A peculiar thrill in left upper eyelid, similar to that felt when winking rapidly. 20th day. S. W. 200th.

Peculiar feeling in eyelid continues. 21st day. S. W. 200th.

Thrill in eyelid gone. 30th day. S. W. 200th.

Ears.

Pain in both ears, with headache in afternoon. 10th day. S. W. 200th.

Earache. 49th day. Wag. 200th.

Earache; the pain extending even to her finger ends. 3d day. Miss M. 200th.

Itching in left ear. 8th day. Isz. *θ*.

Burning of right ear. 1st day. Isz. *θ*.

About 5 P.M., a dull, burning pain in and around the right ear; relieved by pressure. 6th day. S. W. 200th.

Bleeding at the right ear; also bleeding of the nose, which clears her head, and affords her great relief. 7th, 8th, and 9th days. Miss M. 200th.

Feeling of fulness in left ear. 10th day. S. W. 200th.

In evening the right ear is obstructed so that he can hardly hear by it; also a burning in right cheek. 21st day. S. W. 200th.

Buzzing in ears. 10th day. S. W. 200th.

Ringing in ears. 12th day. S. W. 200th.

Deafness in right ear passing off by noon. 22d day. S. W. 200th.

Nose.

Pain and full feeling at root of nose. 4th day. Isz. *θ*.

Nose less painful to touch. 10th day. McG. 200th.

Herpes on lower part of nose. 6th day. McG. 200th.

Herpes disappeared from nose. 9th day. McG. 200th.

Herpes on nose in afternoon, disappearing in evening. 26th day. McG. 200th.

Nose less inflamed; herpes disappearing towards evening. 8th day. McG. 200th.

The swelling near the nose of left side, or rather of lip under left nostril, has come out in the form of pimples, and proves to be herpes, but it is not on the left side; seven or eight pimples, watery or a yellowish-white secretion, first appeared on the 10th day, in form of swelling of the upper lip. 16th day. S. W. 200th.

Nose swollen and inflamed; still painful to the touch, but not so much so as yesterday. 7th day. McG. 200th.

Swelling of and pain in nose all gone. 11th day. McG. 200th.

Bleeding of the nose, which clears her head and affords her great relief. 7th, 8th, and 9th days. Miss M. 200th.

Over-sensitiveness of smell. 12th day. McG. 200th.

Bad smell from nose. 6th day. McG. *0*.

Sneezing at 12 M. 4th day. McG. 10th.

Several fits of sneezing during forenoon, after which the nasal passage seemed less obstructed. 8th day. S. W. 200th.

Sneezing in afternoon, with eructations of wind. 8th day. S. W. 200th.

Sneezing spell, and running of water from nose. 4th day. McG. 200th.

Nose fills up readily; discharge excoriating; septum swollen and painful to touch. 6th day. McG. 200th.

Nose feels stopped up. 16th day. McG. 10th.

Nasal passage much obstructed, with some soreness of nose, with slight catarrh. 1st day. S. W. 200th.

Nasal passages greatly obstructed. 8th day. S. W. 200th.

On rising, had considerable obstruction of nasal passage, but no mucus was raised. 11th day. S. W. 200th.

Nose less obstructed, evening. 3d day. McG. *0*.

Nasal passage less obstructed. 20th day. S. W. 200th.

Nasal passage more obstructed; some cough; 26th day. S. W. 200th.

Left nostril less obstructed than right. 9th and 11th days. S. W. 200th.

Coryza. 1st day. McG. *0*.

Coryza; nasal passage almost entirely obstructed. 1st day. S. W. 200th.

Coryza continuing. 5th and 7th days. McG. *0*.

Coryza from nose still. 12th day. McG. 200th.

Coryza comes on at 4 P.M., each day; goes away at 10 P.M.; not troubled with it in the interval; 7th day. Chan. 3d.

Running from nose; caught a fresh cold in the evening. 5th day. McG. 200th.

Discharge from nose acrid and burning; excoriating. 5th day. McG. 200th.

Fluent coryza, discharge burning and excoriating every part it touches. 7th day. Chan. 3d.

Slight catarrh on awakening. 1st day. S. W. 200th.

Catarrh. 10th, 14th, and 18th days. McG. 200th.

Passed a tough, green plug from right nostril at 11.45 P.M., 5th day. McG. *0*.

Face.

Burning pain in right cheek, lasting five or six minutes, in afternoon. 25th day. S. W. 200th.

Burning in right cheek. 21st day. S. W. 200th.

Occasional shooting pains along the right superior maxillary, extending up to malar bone. 4th day. Isz. *0*.

Muscles of face feel very sore and stiff. 6th day. Chan. 3d.

At 1.30 P.M., a stinging pain in left cheek for a few moments. 7th day. S. W. 200th.

His face (teeth) feels better. 8th day. Isz. *0*.

Face nearly relieved from pain, but some soreness about the upper wisdom tooth of right side. 9th day. Isz. *0*.

An eruption on face was much lessened while taking it, and the skin appeared clearer and finer after the proving. Miss M. 200th.

Mucous membrane of lips much cracked. 8th day. S. W. 200th.

Lips dry and cracked. 15th day. S. W. 200th.

Dryness of the lips. 5th day. S. W. 200th.

Very great dryness of lips. 31st day. S. W. 200th.

Dryness of lips continued, but that of fauces has diminished. 7th day. S. W. 200th.

Lips sore. 10th and 11th days. S. W. 200th.

An ulcer on the inside of lower lip, which had been there a few weeks before commencing the proving, was unchanged by the remedy, but occasionally bled, and assumed a more bloody appearance during the proving. Miss M. 200th.

Swelling of upper lip where the left nostril joins it. 11th day. S. W. 200th.

Lips and gums very sore. 12th day. S. W. 200th.

Teeth.

Sharp, lancinating pain along the molar teeth, extending up to malar bone; also into temporal region. 6th day. Isz. *0*.

Pain along teeth on right side. 7th day. Isz. *0*.

Pain in right molar teeth of upper jaw. 15th day. S. W. 200th.

Had his teeth examined by a dentist on account of the pain; none were decayed, nor the gums inflamed; could scarcely sleep at night; heard the town clock strike every hour through the night. 5th day. Isz. θ.

Pain in teeth continued; aggravated by going into warm room; even getting warm in bed; the pain became so intense that he took *Bell.* 200 to relieve it, without avail. *Puls.* 200, ameliorated the pain. 3d day. James. 200th.

A severe stinging and throbbing pain in right molar teeth, experienced before commencing the proving, has been much worse since taking the medicine. 3d day. James. 200th.

His gum has been very sore and painful the past week from the pushing through of last molar tooth in right lower jaw, which had stopped, apparently, for some time, without making headway. 27th day. McG. 10th.

Gums sore and swollen. 15th day. S. W. 200th.

Soreness of gums of upper jaw, and sense of constriction across forehead. 10th day. S. W. 200th.

Gums bleed easily. 10th day. McG. 200th.

Mouth.

Very painful canker-sore at median line of upper jaw, where the lips join it. 13th day. S. W. 200th.

Tongue clean. 5th day. McG. θ.

Tongue clean and pale. 15th day. S. W. 200th.

Tongue paler than usual. 11th day. McG. θ.

Tongue paler than usual. 14th day. McG. 10th.

Tongue clean, but not so red in middle as usual. 3d day. McG. θ.

Tongue coated with brownish-white mucus. 10th day. S. W. 200th.

Tongue coated white. 15th day. S. W. 200th.

Tongue coated white in the morning. 4th day. Isz. θ.

Tongue coated slightly with a whitish fur. 20th day. S. W. 200th.

Tongue and eyes appear natural, but tongue is perhaps paler than usual. 7th day. S. W. 200th.

Scalding sensation on tongue still remaining. 3d day. McG. 10th.

Scalding sensation on tongue, just beyond the tip, continuing until retiring. 2d day. McG. 10th.

At 1 P.M., papillæ of tongue more enlarged. 8th day. S. W. 200th.

Papillæ on tongue much enlarged, especially near the root. 8th day. S. W. 200th.

Canker-spots near end of tongue. 7th day. S. W. 200th.

Severe stinging pains in uvula, as if it would break off every time he coughs. 5th day. Chan. 3d.

Soft palate fallen. 2d day. McG. 200th.

Pharynx and Œsophagus.

Dryness of lips and fauces, well marked. 6th day. S. W. 200th.

Great dryness of the throat and lips. 22d day. S. W. 200th.

Dry feeling in throat remaining; burning feeling almost gone. 3d day. McG. 200th.

Throat dry, rendering it necessary to drink large quantities of water to assist in deglutition. 11th day. S. W. 200th.

Throat dryer, and slight burning at 4 P.M., increasing in extent till midnight. 2d day. McG. 200th.

Throat begins to feel dry at 3 P.M. 2d day. McG. 200th.

Dry feeling in throat (momentarily relieved by cold water) in the evening, more severe than yesterday. 2d day. McG. 10th.

Dryness of throat. 4th day. McG. 10th.

Dryness of throat after 8 P.M. 3d day. McG. 10th.

Dry feeling in throat at 9 P.M. 1st day. McG. 10th.

During the day dryness of fauces with increased thirst, and corresponding desire to urinate. 4th day. S. W. 200th.

Dryness of throat with thirst, *causing him to drink large quantities of water at short intervals of time.* 2d day. James. θ.

Fauces dry and inflamed. 15th day. S. W. 200th.

Every inhalation seems to dry up mucous membrane of throat and fauces. 4th day. Chan. 3d.

Rawness in throat and fauces. 1st day. Isz. θ.

Rawness of the fauces. 1st day. Isz. (son). θ.

Immediately after taking it feeling of rawness of the fauces. 1st day. Isz. (daughter). θ.

Rawness in the throat. 3d day. Isz. θ.

Throat feels better of the rawness. 10th day. Isz. θ.

He declared he had a sore throat, and wanted other medicine. 1st day. Isz. (son). θ.

Throat and tongue reddened, but flabby. 21st day. S. W. 200th.

Throat feels very sore in afternoon. 3d day. Chan. 3d.

Throat sore. 21st day. S. W. 200th.

Sore throat, worse on the right side. 3d day. Miss M. 200th.

Soreness of throat slightly better in morning; almost entirely disappearing by evening. 3d day. James. θ.

Awoke at 8.30 A.M. with soreness of throat increased. 2d day. James. *θ.*

Very sore throat, particularly the fauces. 4th day. Chan. 3d.

Throat better. 2d day. Isz. (son). *θ.*

Throat still sore. 22d day. S. W. 200th.

Throat less sore. 24th day. S. W. 200th.

No soreness of throat; tonsils normal; epiglottis lengthened. 20th day. S. W. 200th.

Much better; appearance of throat normal. 26th day. S. W. 200th.

Throat slightly sore. 7th day. S. W. 200th.

On arising found the soreness of throat entirely gone. 4th day. James. *θ.*

Tonsils swollen and inflamed, the left more than the right. 7th day. S. W. 200th.

At 8 A.M., tonsils swollen, but not so red as last night. 8th day. S. W. 200th.

Tonsils swollen enough to cause a slight feeling of rawness on swallowing. 8th day. S. W. 200th.

Right tonsil more swollen than left. 9th day. S. W. 200th.

Tonsils much reddened, and veins and vessels on surface enlarged. 10th day. S. W. 200th.

Several spots as of ulceration on left tonsil. 10th day. S. W. 200th.

Tonsils normal. 20th day. S. W. 200th.

Epiglottis lengthened. 20th day. S. W. 200th.

Epiglottis relaxed so as to irritate the tongue. 21st day. S. W. 200th.

As a rule is very subject to colds and sore throat, taking cold, which affects her throat, upon the least exposure; had fewer colds than any winter for a long time while proving. Miss M. 200th.

Slight pain on swallowing. 11th day. S. W. 200th.

Throat became slightly sore, causing pain in effort of swallowing, about 10 A.M., continuing all day, and on retiring at 10.30 P.M. 1st day. James. *θ.*

Disagreeable sensation in pharynx and œsophagus extending to stomach, with feeling of distress. 25th day. McG. 10th.

Hawks up considerably. 8th day. McG. *θ.*

For the last four or five days been hawking up from throat matter which should come from nostrils. 7th day. McG. *θ.*

Raised some mucus from throat. 12th day. S. W. 200th.

Some phlegm raised in morning; nasal passage less obstructed. 20th day. S. W. 200th.

Appetite and Taste.

Bad taste in the mouth. 4th day. Isz. θ.

"Brassy" taste in mouth; tongue coated. 14th day. S. W. 200th.

Taste of what has been eaten rising up to pharynx three or four hours after eating. 15th day. McG. 10th.

In morning no appetite. 22d day. S. W. 200th.

Little appetite at breakfast, but drank large quantities of water. 8th day. S. W. 200th.

No appetite for breakfast; considerable thirst, but relieved by drinking small quantities of water. 20th day. S. W. 200th.

Good appetite. 19th and 28th days. McG. 200th.

Appetite good. 7th day. S. W. 200th.

Appetite good, food tastes natural, eructations in evening. 26th day. McG. 200th.

Appetite fair. 10th and 11th days. S. W. 200th.

Appetite improved. 30th day. S. W. 200th.

Increased desire to smoke; wants to do nothing but smoke and be alone; smoking greatly aggravates all the symptoms, but the desire for smoking is increased. 2d day. Chan. 3d.

Considerable thirst. 6th day. S. W. 200th.

Very thirsty in afternoon and evening. 15th day. McG. 10th.

Thirst in evening. 24th day. McG. 10th.

Very thirsty, drinking large quantities of water, at 7 P.M. 12th day. McG. 10th.

Very thirsty in evening. 17th day. McG. 10th.

Thirst towards evening. 1st day. Evans. θ.

Felt more thirsty than usual at 6 P.M. 6th day. James. θ.

Great thirst. 10th and 12th days. S. W. 200th.

Thirst increased, but not satisfied by drink. 7th day. S. W. 200th.

Great desire to drink water from excessive dryness of throat. 1st day. James. 200th.

No thirst during entire time. 6th day. Chan. 3d.

In evening less thirst. 7th day. S. W. 200th.

Aversion to water, makes him sick to think of it. 4th day. Wilt. 3d.

Gastric Symptoms.

Eructations. 25th day. McG. 10th.

Frequent eructations, lasting some time. 24th day. McG. 10th.

Eructations after meal. 4th day. McG. 10th.

Eructations after tea. 6th day. McG. 10th.

Eructations tasting of what has been eaten. 2d day. McG. 10th.

Eructations of wind, with sneezing, in afternoon. 8th day. S. W. 200th.

Unusual taste of eructations in morning. 28th day. McG. 200th.

Nausea and eructations after dinner. 22d day. McG. 200th.

Nausea and eructations after eating. 24th day. McG. 200th.

Eructations two hours after eating. 19th day. McG. 200th.

Eructations three or four hours after meals at night. 25th day. McG. 200th.

Nausea, belchings of wind. Mrs. A. Pond's Ext.

Gastric troubles. Mrs. A. Pond's Ext.

Spasmodic eructations and hiccoughs. 19th day. McG. 10th.

Hiccoughs. Mrs. A. Pond's Ext.

Violent hiccough at 6 P.M., four hours after eating. 1st day. McG. 10th.

Slight nausea. 5th day. Chan. 3d.

Has to remain quiet for two hours, without even reading, to avoid vomiting; even then has eructations and heartburn. 22d day. McG. 200th.

Felt sick at her stomach, with a desire to lie down, accompanying dizziness. 1st day. Mrs. C. 6th.

Nausea, eructations, and violent hiccough after eating pork, followed by burning pain in stomach and œsophagus, and two hours after with cramp pains in stomach and chest. 18th day. McG. 200th.

Qualmishness after eating. 9th day. McG. *0.*

Qualmish feeling. 12th day. McG. *0.*

Qualmish after eating pork, eructations, and a constant dread of vomiting. 10th day. McG. *0.*

Woke up with a nauseous feeling and severe headache in frontal bone. 11th day. McG. 10th.

Nausea after eating. 23d day. McG. 10th; also 200th.

Nausea after eating food; has to keep very quiet to prevent vomiting up what has just been eaten. 8th day. McG. *0.*

Nausea after eating; must keep quiet after eating. 19th day. McG. 10th.

Nausea after eating in less than half an hour. 11th day. McG. *0.*

9.30 A.M., one hour after eating, nausea and feeling as if he was going to vomit, lasting an hour. 1st day. McG. 200th.

After eating pork for dinner, nausea, eructations, and violent hiccough, afterwards burning pain in stomach and œsophagus, and two hours after cramp pains in stomach and chest. 18th day. McG. 200th.

Invariably produced nausea, headache, and general stupor for

two hours after taking the medicine, but afterwards felt clearer and brighter than before. Miss M. 200th.

Nausea and inclination to vomit at 11 P.M. 5th day. McG. *0.*

Desire to vomit, with ringing in ears, and eyes very painful. 12th day. S. W. 200th.

Tendency to vomit after every meal. 12th day. McG. *0.*

Desire to vomit. 14th day. S. W. 200th.

Stomach.

Always had cramp pain in stomach after eating the day after taking medicine. Wag. 200th.

Cramp pains in stomach. Mrs. A. Pond's Ext.

Violent throbbing in stomach. Mrs. A. Pond's Ext.

Empty gone feeling at pit of stomach, at 8.30 A.M., on arising, with bursting headache. 16th day. McG. 10th.

Distension of stomach by wind. Mrs. A. Pond's Ext.

Stomach disordered, with pains from injudicious eating. 49th day. Wag. 200th.

Heaviness back of stomach increased. 3d day. Chan. 3d.

Sensation of heavy weight at back of stomach. 1st day. Chan. 3d.

Pain back of the stomach along the spinal column, about 4 P.M. 6th day. Isz. *0.*

Sensation of heaviness *back* of the stomach, but less than while taking the 3d pot. Chan. 200th.

Abdomen.

Pain in abdomen morning and evening. 22d day. McG. 10th.

Spasmodic movements of diaphragm. 21st day. McG. 10th.

Slight griping after breakfast. 11th day. McG. *0.*

Cramps in stomach and transverse colon for a few minutes, two hours after a hearty dinner, but eating no unusual food. 28th day. McG. 200th.

Slight griping in umbilical region just before dinner. 3d day. McG. 10th.

Slight griping pain in umbilical region of abdomen, at 10 P.M. 9th day. McG. 10th.

Griping pains in umbilical region slightly felt at 7 A.M. 10th day. McG. 10th.

Cramp pains in umbilical region, continuing a short time after rising. 21st day. McG. 10th.

Cramp pain in umbilical region. 29th day. McG. 10th.

In evening a great deal of flatulence, with tenderness of the abdomen, not increased by pressure. 4th day. S. W. 200th.

Discharge of flatulence. 1st day. James. 200th.

Pain in the groin. Mrs. A. Pond's Ext.

Stool and Anus.

Bowels slightly constipated; no passage. 2d day. McG. *0.*

Bowels regular; in afternoon a feeling as if obliged to evacuate the bowels (similar to yesterday), but on endeavoring to have a passage was unsuccessful. 6th day. S. W. 200th.

Urging to stool at 5.30 and 8 A.M., and 1.30 and 6.30 P.M., with stool at 6 A.M., and 1.30 P.M. 15th day. McG. 10th.

Urging to stool at 7.30 A.M., and in afternoon. 4th and 5th days. McG. 10th.

Urging to stool. 18th day. McG. 10th.

Urging to stool, with easy passage of large stool in morning and afternoon. 13th day. McG. 10th.

At 8.30 P.M., urging to stool, with much flatulence. 8th day. S. W. 200th.

During the afternoon and evening, a constant desire to evacuate the bowels, together with peculiar sensations around the anus, as in piles. 5th day. S. W. 200th.

Operation at this time, 10 P.M., rather costive. 7th day. S. W. 200th.

Operation at 9 P.M.; costive. 10th day. S. W. 200th.

Bowels rather costive; fæces dark and slimy. 8th day. S. W. 200th.

Bowels costive. 3d day. Wilt. 3d.

Bowels rather costive. 20th day. S. W. 200th.

Bowels regular, with headache. 20th day. McG. 200th.

Bowels regular, and stools natural. 5th, 11th, and 13th days. S. W. 200th.

Natural stool to-day. 3d day. McG. *0.*

Fæces dark. 10th day. S. W. 200th.

Stool slightly covered with mucus. 4th day. McG. *0.*

Diarrhœa on 21st day, continuing two days; probably caused by change of water. Mur. 200th.

Spasmodic contraction of sphincter ani. 6th day. Chan. 3d.

Slight itching of the anus. 5th day, S. W. 200th.

Itching at anus. 24th day. McG. 10th.

Pulsations in rectum when lying in a half recumbent position. 25th day. McG. 200th.

Pulsations in rectum and penis plainly felt, and synchronous with radial pulse. 26th day. McG. 10th.

Pulsations in rectum, as if piles would protrude. 21st day. McG. 10th.

Urinary Organs.

Increased desire to urinate, with corresponding thirst. 4th day. S. W. 200th.

Great desire to urinate. 20th day. S. W. 200th.

Great desire to urinate, but pass but little water; it comes away in drops. 2d day. Wilt. 3d.

Flow of large quantities of urine, with frequent desire to urinate. 1st day. Holl. *θ*.

Urinates too often, with continual desire to pass water. 2d day. Coop. 6th.

Frequent urination during the day. 17th and 18th days. McG. 10th.

Urine clear, saltish. 3d day. McG. *θ*.

Urine clear and copious. 15th day. McG. 10th.

Increased urination; urine pale. 1st day. Isz. *θ*.

Urine very profuse, and light in color. 6th day. Chan. 3d.

Urination profuse; urine pale. 2d day. Isz. *θ*.

Profuse urination, but only a little at a time; seems that bladder fills up very quickly; urine light-colored. 4th day. Chan. 3d.

In the pale urine, a greasy deposit, which sinks to bottom of vessel, rising to top when shaken, looking like laudable pus. 6th day. Chan. 3d.

Acts upon the kidneys more when lying down, compelling her to rise fifteen to thirty minutes afterwards, to pass urine in large quantities. Mrs. A. Pond's Ext.

Male Sexual Organs.

Pulsations in glans penis felt several times in course of day. 18th day. McG. 10th.

Stitching in glans penis. 24th day. McG. 10th.

Tingling in glans penis. 15th day. McG. 10th.

Pain running down the spermatic cord into testes; the scrotum perspired freely through the night; had an erection, no seminal emission. 5th day. Isz. *θ*.

Great desire for an embrace. 3d day. Wilt. 3d.

Two emissions last night, with an incessant desire for an embrace. 11th day. Wilt. 3d.

Erections quite frequent; continue all day, off and on. 11th day. Wilt. 3d.

Erection, but no emission. 2d day. Isz. *θ*.

On retiring, yesterday, had an erection without desire, but on awaking this morning, discovered he had an emission. 27th day. McG. 10th.

Erection, but no seminal emission. 5th day. Isz. θ.

Erections, and inability to settle his mind. 14th day. Wilt. 3d.

Erections continue, but not so frequent. 13th day. Wilt. 3d.

Seminal emission without erection, with consciousness. 24th day. McG. 10th.

Seminal emission in night, but not conscious of the fact at the time. 11th day. S. W. 200th.

Seminal emission during the night, without dreams, of which he was unconscious till morning. 4th day. James. θ.

Seminal emissions without sensual dreams during night. 3d day. James. 200th.

Emission caused by dreams. 2d day. Wag. 200th.

Emission, earache, and stomach disordered; pains from injudicious eating; depressed in mind. 49th day. Wag. 200th.

Had an emission last night; felt weak and giddy on rising. 3d day. Wilt. 3d.

Seminal emission during night, without being aware of it. 6th day. McG. 200th.

Seminal emission during the night, without being aware of it until morning. 5th day. James. θ.

Emission while dreaming. 14th day. Wag. 200th.

Another emission last night. 12th day. Wilt. 3d.

Emission, restless, and dreams. 42d day. Wag. 200th.

No emission for five days; health good. 8th day. Wag. 200th.

Emission at night. 35th day. Wag. 200th.

Emission, with headache and depression of mind. 40th day. Wag. 200th.

When well, would have an emission every five or six weeks; during the proving, had them oftener than once a week. Wag. 200th.

Female Sexual Organs.

Observed no change whatever in her menses, and was as regular as before. Miss M. 200th.

Good in leucorrhœa and vaginismus. (See *Clinical Observations.*)

Windpipe and Cough.

Hoarse on arising. 3d day. McG. 200th.

Awoke with hoarseness as from a cold. 1st day. James. θ.

Difficulty in talking. 2d day. McG. 200th.

Some cough, but no phlegm; no hoarseness. 7th day. S. W. 200th.

Every time he coughs, severe stinging pain in uvula as if it would break off. 5th day. Chan. 3d.

Some cough. 10th day. S. W. 200th.

Dry cough. 5th day. Chan. 3d.

Dry cough, at times with expectoration of thick, yellowish or greenish-gray mucus of a putrid taste. 5th day. Chan. 3d.

Expectoration of a putrid taste. 5th day. Chan. 3d.

Chest and Respiration.

Difficult breathing; when lying down felt a smothering sensation. 4th, 5th, and 6th days. Miss M. 200th.

The pains on *left* side of chest ceased on the 24th day, and gave place to severe pleuritic pain on *right* side of chest; these pains gradually abated, and in forty-eight hours were replaced by the pains in left arm and chest. Mur. 200th.

Pain in right lung. 1st day. Isz. θ.

Pain in right lung, perceptible in deep breathing, after seminal emission. 14th day. Wag. 200th.

Some pain in right lung. 3d day. Isz. θ.

Pain in lung almost gone. 17th day. Wag. 200th.

Cramp pains in chest, 11 P.M. 15th day. McG. 10th.

Stitches in chest. 22d day. McG. 10th.

Stitches in chest for a few minutes, occasionally. 21st day. McG. 10th.

Always had stitches in lower part of lungs the day after taking the medicine. Wag. 200th.

Palpitation of heart. Mrs. A. Pond's Extract.

A sense of constriction across the chest, increased by taking a long breath or breathing rapidly. 7th day. S. W. 200th.

Dull, aching pain constantly in muscles of left side of chest, at first high up, then lower down, now under the edge of short ribs; aggravated by using the arm; much worse in the afternoon and evening. Mur. 200th.

Back.

Severe pain in region of kidneys when getting up in the morning. 4th day. Chan. 3d.

Constant dull pain under lower angle of left scapula. 15th day. Mur. 200th.

Sore pain down the cervical vertebræ. 7th day. Chan. 3d.

Slight pain in right side of the neck, along the course of the sterno-cleido-mastoid muscle; worse in the morning and when moving it. 1st day. Evans. θ.

Upper Extremities.

Constant dragging pain in left shoulder-joint. Mur. 200th.

Bruised feeling in upper arms and shoulder, worse from motion. 2d day. Wilt. 6th.

Stiffness of arms and shoulders after horseback riding. 22d day. McG. 10th.

Stiffness in arms and shoulders. 23d day. McG. 10th.

Pain in shoulders and upper arms continues, but not so violently, accompanied with drowsiness. 3d day. Wilt. 6th.

Bruised feeling in arms and shoulders has entirely vanished, but appears to have descended into the lower extremities; left leg more painful than right. 12th day. Wilt. 6th.

Stiffness in arms and shoulders wearing away. 24th day. McG. 10th.

Tired feeling in right arm and leg. 8th day. McG. 200th.

Very severe sore pain in head of right humerus, extending down to elbow-joint, accompanied with slight stiffness at elbow-joint. 1st day. Chan. 3d.

Pain in both humeri. 4th day. Chan. 3d.

Pain in right humerus from shoulder to elbow is very severe. 3d day. Chan. 3d.

Intense pain in right humerus. 7th day. Chan. 3d.

Pain in humerus, extending down to elbow, causing stiffness at that joint. Chan. 200th.

Pain in right humerus is the last symptom to leave. Chan. 3d.

Tenderness of right biceps, increased by pressure. 1st day. S. W. 200th.

Tired feeling in arms and limbs when walking. 6th day. McG. 10th.

Tired, weary feeling in arms. 21st day. McG. 10th.

Weariness of right arm. 15th day. S. W. 200th.

Rheumatic pain, with constant aching in left arm. Mur. 200th.

Itching of right arm increased, with a slight pimple here and there. 8th day. S. W. 200th.

Increased stiffness of elbow-joint. 3d day. Chan. 3d.

Shooting pains running down the forearm along flexor muscles into palm of right hand. 2d day. Isz. *0.*

Lancinating pain in left wrist-joint. 3d day. Mur. 200th.

Violent pain in back of right hand, extending to the shoulder-joint. 2d day. Wilt. 3d.

Pain in hand has left. 4th day. Wilt. 3d.

Hands become chapped. 7th day. McG. 10th.

Sore pain in right thumb-nail after slightly hitting it against a table. 6th day. McG. 10th.

The pain in right thumb-nail becomes more severe; worse towards night, and exceedingly painful whenever waking up during the night. 7th day. McG. 10th.

Sore pain in thumb-nail, with sensation as if nail was growing into flesh. 10th day. McG. 10th.

Discharge of pus from under right thumb-nail, which relieved the pain in a few minutes, at 11 A.M. 11th day. McG. 10th.

Excessively sore finger from which a small piece of skin was rubbed. 2d day. McG. 10th.

The finger from which a small portion of skin was rubbed on 2d day still very sore on touching it. 15th day. McG. 10th.

Lower Extremities.

Stitching pain in left hip and under left patella while walking. 8th day. Isz. *0.*

Tired feeling in both limbs from hips down to feet; inability to run fast. 2d. day. McG. 10th.

Tired feeling in inferior extremities. 4th day. McG. 10th.

Tired, weary feeling in right limb, in which are varicose veins; changing position while sitting affords no relief; slight improvement from placing it on a chair; removed entirely by walking about. 5th day. McG. *0.*

Tired, weary feeling in right limb (thigh), as if he had walked a long journey, at night. 6th day. McG. *0.*

Tired feeling in right limb. 12th and 13th day. McG. 200th.

Tired feeling in right limb appearing as before. 7th day. McG. 200th.

Weary pain in limb (right) more marked; better when moving about; worse when sitting; better from lying down, or placing limb in horizontal position; changing its position while sitting does not relieve. 7th day. McG. *0.*

Weary feeling in thigh. 8th day. McG. *0.*

Weary feeling in the right limb less marked. 9th day. McG. *0.*

Weary feeling in right limb. 23d day. McG. 200th.

Weakness of lower limbs. 8th and 15th day. S. W. 200th.

Stitching pain along left sciatic nerve. 6th day. Isz. *0.*

Limbs ache, with quite a tendency to go to sleep. 1st day. Holl. *0.*

Limbs easily go to sleep in afternoon. 16th day. McG. 10th.

Itching on inferior extremities when undressing. 10th day. McG. 200th.

Itching of limbs felt from the beginning of proving better. 24th day. S. W. 200th.

Feel rather stiff in upper part of thighs. 24th day. McG. 10th.

Pain particularly in middle and lower third of thigh, and in popliteal space. 6th day. McG. *0.*

Sore pain in right femur very severe. 4th day. Chan. 3d.

Severe sore pain running down thighs, particularly the right. 1st day. Chan. 3d.

Lancinating pain in left knee-joint and left ankle-joint. 5th day. Mur. 200th.

Some pain in left knee. 6th day. Isz. *0.*

Soreness of knee-joints. 1st day. Chan. 3d.

Weakness of knees in afternoon. 21st day. S. W. 200th.

Sore pain in popliteal spaces. 4th day. Chan. 3d.

Weakness of knee (formerly affected by rheumatism) in afternoon. 22d day. S. W. 200th.

Soreness of femoral vessels to middle third of thigh. Mrs. A. Pond's Ext.

Forcing feeling in varicose veins at 6 P.M. 7th day. McG. 200th.

Dilatation of varicose veins. 6th day. McG. *0.*

Varicose veins very sensitive. 7th day. McG. *0.*

Varices very sensitive. 12th day. McG. 200th.

Peculiar sensation in varices. 11th day. McG. 200th.

Apparent diminution of varicose veins above knee. 14th day. McG. 200th.

Tired feeling when walking; instep feels strained. 2d day. McG. 200th.

Tingling in foot while counting femoral (artery) pulse. 16th day. McG. 10th.

Feet go to sleep easily while out driving in the cold wind. 20th day. McG. 10th.

Severe pain in right great toe. 2d day. Isz. (son.) *0.*

Sudden pain in right great toe while running, which she never felt before. 1st day. Isz. (daughter.) *0.*

Pain in corns as soon as boots are put on in morning (rainy day), becoming permanent during the day, occasionally pulsating. 3d day. McG. *0.*

Pulsations in corns on both feet all day, after paring them in the morning. 9th day. McG. 10th.

Pulsations in corns in evening. 23d day. McG. 10th.

Extreme pulsations in corns on left toes at 10 P.M. 21st day. McG. 10th.

Sharp pains in corns on toes. 6th day. Isz. *0.*

Stitching in corns on right foot at 10 P.M. 1st day. McG. *0.*

Sleep and Dreams.

Drowsiness. 11th day. Wilt. 3d.

Drowsy feeling two hours after dinner. 6th day. McG. 10th.

Sleepiness every afternoon. Mur. 200th.

Sleeps longer than usual. 8th day. Wag. 200th.

Slept heavily. 15th day. S. W. 200th.

Sleeps well. 1st and 12th day. McG. *0.*

Slept well. 6th day. S. W. 200th.

Slept better at night. 8th day. Isz. *0.*

Slept well at night. 10th day. Isz. *0.*

Sleeps well; slight headache. 25th day. McG. 200th.

Sleep disturbed by dreaming of the business of the day. 1st day. McG. 200th.

Sleeps uneasily; wakes up continually from thinking of business of day, turning over in bed to get relief. 11th day. McG. 200th.

Sleep somewhat disturbed. 1st day. Isz. *0.*

Wants to sleep, but cannot on account of thoughts pressing on him. 11th day. McG. 200th.

Cannot go to sleep at night; thinks too much. 6th day. Chan. 3d.

Could scarcely sleep at night with pain in teeth and upper jaw. 5th day. Isz. *0.*

Did not sleep well at night. 3d day. Isz. *0.*

Unable to sleep for over an hour last night; but, having fallen asleep, rested well until morning. 6th night. S. W. 200th.

Could not sleep well. 2d day. Isz. *0.*

Less inclination to sleep than usual. 1st day. McG. *0.*

Rest quite uneasy during the night; dreams quite vivid toward morning; unusual; and, on awaking, had a slight catarrh. 1st day. S. W. 200th.

Uneasy sleep in morning. 22d and 23d day. McG. 10th.

Restless sleep and dreams after emissions. 40th day. Wag. 200th.

Great restlessness, could not sleep quiet, although motion makes him feel worse. 4th day. Wilt. 6th.

Unpleasant dreams, at 5 A.M.; uneasy sleep, afternoon. 3d day. McG. *0.*

Unpleasant, fearful dreams. 2d day. McG. *0.*

Dreamt there was a bat flying in the room, with fear of bodily injury therefrom. 6th day. McG. 200th.

No dreams. 4th day. McG. *0.*

Before retiring, had strange dreams, and great restlessness after going to sleep, but, as a general thing, arose more refreshed and with a clearer mind. Miss M. 200th.

Slept well until about 4 A.M., when he had short light naps, until 6.30 A.M., when he arose. 13th day. S. W. 200th.

Uncomfortable sleep in morning, tossing and turning continually. 24th day. McG. 10th.

Unrefreshed feeling when awaking. 17th day. McG. 200th.

Awoke at 6.30 A.M., feeling bright and cheerful, slept well during night. 1st day. S. W. 200th.

Rose feeling dull. 21st day. S. W. 200th.

Woke up at 7 A.M., with a bursting headache, with vertigo on stooping; headache wearing off toward evening. 1st day. McG. 200th.

Fever.

Easily takes cold; being exposed for a moment causes him to take a fresh cold. 6th day. McG. 200th.

Disposition to take cold easily. 12th day. McG. 200th.

Cold feeling creeping over body upon standing a moment in open air; chill runs up legs, head stopped up, dull pain over orbit. 6th day. McG. 200th.

Flashes of chilliness over the back and hips, extending down the extremities; 9 A.M. 1st day. Holl. *θ*.

Cold increasing. 13th day. S. W. 200th.

Took cold again from being exposed for a moment to a draft without a hat on. 7th day. McG. 200th.

Felt very chilly on going to bed, and dreaded an attack of fever. 5th day. McG. 200th.

Slight fever; pulse accelerated. 12th day. Wilt. 6th.

Feverish. 15th day. S. W. 200th.

Some feverishness in forenoon, also headache. 7th day. S. W. 200th.

Slight feverishness at night. 26th day. S. W. 200th.

High fever during the night. 3d day. Miss M. 200th.

Feverishness, headache, tongue coated, and "brassy" taste in mouth. 14th day. S. W. 200th.

Fever in the hands. 1st day. James. 200th.

Fever still remains; pulse the same. 13th day. Wilt. 6th.

Fever in the hands, with burning in the eyelids on closing them. 1st day. James. 200th.

Can count beats of heart by lying still, and feel pulsations through ball of fingers very distinctly. 24th day. McG. 10th.

Pulse 80 (usually 65 to 70). 3d day. McG. *θ*.

Pulse 56, 58, 62, irregular. 10th day. McG. 10th.

Pulse 60, 62, and full, at 11 P.M. 11th day. McG. 10th.

Pulse 60, every 5th, 6th or 7th beat a little faster and stronger. 15th day. McG. 10th.

Pulse 60. 16th day. McG. 10th.

Pulse 60 at 8 A.M. 24th day. McG. 10th.

Pulse 68 at 10.30 P.M. 24th day. McG. 10th.

Pulse 62 at 8 A.M. 25th day. Evening, pulse 68. McG. 10th.

Pulse 62. 26th day. McG. 10th.

Pulse 78, irregular in beat, full and hard, then soft, almost imperceptible. 6th day. McG. 200th.

Pulse 78. 7th day. McG. 200th.

8 A.M., pulse 86; 8 P.M., pulse 78. 14th day. McG. 200th.

Pulse 76 at 9.30 A.M. 15th day. McG. 200th.

Pulse 76 at 7.30 P.M. 23d day. McG. 200th.

Pulse 60 and full, in evening. 24th day. McG. 200th.

Pulse 56, 60, 62 in morning. 26th day. McG. 200th.

Pulse 76 in evening, full, occasionally becoming weaker. 26th day. McG. 200th.

Pulse 60 in morning, 66 in evening. 25th day. McG. 200th.

At 2 P.M., pulse 96 and full. 7th day. S. W. 200th.

At 10 P.M., pulse 80. 7th day. S. W. 200th.

Pulse 88 and 92. 8th day. S. W. 200th.

Pulse 80 at 10.30 P.M., 9th day. S. W. 200th.

Pulse at 8 A.M., 96, at 10 P.M., pulse 80. 10th day. S. W. 200th.

At 8 A.M., pulse 92, at 1 P.M., pulse 72. 11th day. S. W. 200th.

10 P.M., pulse 76. 11th day. S. W. 200th.

At 8 P.M., pulse 76 and full. 12th day. S. W. 200th.

At 10 P.M., pulse 80 and full. 13th day. S. W. 200th.

Pulse at 10 P.M., 72. 14th day. S. W. 200th.

Pulse 88 and wiry. 31st day. S. W. 200th.

At 9 P.M., pulse 84 and full. 15th day. S. W. 200th.

1 P.M., pulse 84, at 10 P.M., 80. 20th day. S. W. 200th.

Pulse at 10 P.M., 70. 21st day. S. W. 200th.

Pulse at 10 P.M., 76. 22d and 24th days. S. W. 200th.

Pulse 80 at 10 P.M. 26th day. S. W. 200th.

Pulse faster in morning than evening. McG. and S. W.

Perspired freely at night after lying down. 3d day. Wilt. 6th.

Skin.

Feeling as if vermin were running over body. 6th day. McG. 10th.

Sensation of vermin over body continuing, also the itching in axilla. 8th day. McG. 10th.

Feeling as if vermin were crawling along the edges of the hairs. 6th day. Isz. *0.*

Feeling as of vermin all over hairy parts of body. 25th day. McG. 10th.

Feeling as if vermin were on hairy parts. 27th day. McG. 10th.

Itching all over body when undressing. 26th day. McG. 10th.

Itching in axillæ; more severe in right. 6th day. McG. 10th.

Itching in axillæ. 8th day. McG. 10th.

Slight itching in axilla. 10th day. McG. 10th.

Itching on right arm, with scattering pimples. 8th day. S. W. 200th.

Itching in left ear and over the body under the clothing. 8th day. Isz. *0.*

On awaking, at 6 A.M., irresistible desire to scratch the hands, relieved by rubbing them, and putting them in the cold air, but washing in cold water does not alter the sensation in the least; elevation of the skin between the thumb and forefinger in little pimples, the right hand worse than left. 10th day. McG. 10th.

Itching of hands. 13th day. McG. 10th.

Slight itching on hands at 7 P.M. 12th day. McG. 10th.

Desire to scratch the hands violently on awaking in morning, the itching is so intense; relieved temporarily by rubbing them together; made worse by scratching. 9th day. McG. 10th.

Itching nearly gone. 27th day. S. W. 200th.

Pimples on body not so sensitive. 8th day. McG. 10th.

Pimples behind ear and on body, very sore upon touch or pressure. 3d day. McG. *0.*

Eruption of fine pimples all over body. 7th day. McG. 10th.

Pimples on nates are very sore upon touch. 26th day. McG. 10th.

Sore feeling in pimples continues. 4th day. McG. *0.*

Herpes improved. 20th day. S. W. 200th.

Herpes nearly gone. 24th day. S. W. 200th.

Herpes disappeared; 26th day. S. W. 200th.

Hands become more chapped. 8th day. McG. 10th.

Skin on hands not so rough and uncomfortable. 13th day. McG. 10th.

Generalities.

Feeling of lassitude in afternoon. 11th day. S. W. 200th.

Indisposed to exercise, but studying is not disagreeable. 7th day. McG. 200th.

Feeling of languor all over body. 2d day. Coop. 6th.

General lassitude and feeling of weariness. 1st day. Holl *0.*

General feeling of being unwell. 11th day. S. W. 200th.

Feeling tired. 20th day. S. W. 200th.

Easily feel tired from standing. Evening, 3d day. McG. *6.*
Easily becomes fatigued while walking. 3d day. McG. 10th.
Easily becomes tired. 6th day. McG. 200th.
Feeling better in forenoon. 29th day. S. W. 200th.
Felt better; all former symptoms have disappeared. 18th day. Wilt. 6th.
Pain almost gone; well in mind and health. 17th day. Wag. 200th.
Feels well and in good spirits, having been outdoors pretty much all day. 17th day. McG. 200th.
The feeling for a short time after taking the remedy was anything but pleasant, but the effects were good; had fewer colds than any winter for a long time; as a general rule is very subject to colds and sore throat, taking cold, which affects the throat, upon the least exposure. Miss M. 200th.
Removed the unpleasant consequences arising from taking cold, when not produced by the medicine. Mrs. A. Pond's Ext.
A reappearance of all the former symptoms, but in a milder form, from 1st to 10th day; was afraid to risk another dose; his mind was in a fearful condition; the nocturnal emissions caused his face to break out in pimples, and to feel badly; he felt wretchedly; took *Cantharis*, afterward *Pulsatilla*. Wilt. 12th potency, one dose.
All the symptoms increased in severity. 7th day. Chan. 3d.
He increased in weight while proving. Wag. 200th.
Had never been so well in winter before. Wag. 200th.
He never took so few colds in winter before. Wag. 200th.

Aggravations.

Pains worse in afternoon and evening. Mur.
Headache worse in morning and evening. Mur.
Headache worse on rising in morning. McG.
Headache worse after second sleep in morning. McG.
Headache worse at night. S. W.
Headache worse sitting or standing. Chan.
Headache increased by stooping. S. W.
Aggravation (headache) from a draft of air. McG.
Aggravation from taking cold. McG.
Aggravation from using the arm. Mur.
Aggravation of pains in limb while sitting. McG.
Sore throat worse on right side. Miss M.
Smoking greatly aggravates all the symptoms. Chan.
Pain in arms worse from motion. Wilt.
Skin symptoms worse from scratching.

Ameliorations.

Headache better at night. Wag. McG.
Headache better outdoors. James.. McG.
Headache better while lying down. Chan. McG.
Headache relieved by eating. Mur.
Rubbing the forehead relieves frontal headache. Chan.
Pressure relieves momentarily the headache. Chan. McG.
Amelioration from placing the limb in horizontal position. McG.

Clinical Observations

. Could be given here in great number if necessary, from many sources; some reliable, many doubtful; but sufficient, however, is known to prove to the satisfaction of all that this is a valuable drug, and one that will improve on longer and better acquaintance. Like Apis, Lachesis, Cimicifuga, Baptisia, it will bear examination, and well repay attentive investigation.

Dr. Hering, who was probably the first in Philadelphia, if not elsewhere, to test its virtue, had his attention first called to it by Therm T. Pond, the original proprietor of Pond's Extract. In 1836, Mr. Pond visited Philadelphia, to place his daughter under Dr. Hering's care and treatment for consumption. This young lady was very beautiful and interesting, and left pleasing recollections upon her physician's mind; for after the lapse of many years it pleased him to dwell over the case which he cured, and speak of her beauty and graces to the writer. During this time he became acquainted with Hamamelis, and obtained the mode of preparation from Mr. Pond. He also obtained some of the extract, and some of the shrub, and prepared from it some of the extract, which he avers was similar in color and effect with the extract prepared by Mr. Pond. After this trial he was satisfied, and knowing the mode of preparation, was willing to use it, and eventually made a proving of it. This proving being in German, was not available to me, nor used in this article. Dr. Hering considers Hamamelis useful in certain forms of hemorrhage, and thinks that it possesses many of the medicinal virtues of Aconite and Arnica.

Dr. Holcombe, of New Orleans, considers it good in *uterine hemorrhages*, with or without abortion, in yellow fever.

Dr. A. K. Hills, of New York, cured a case of *fistula in ano* with Hamamelis. See Proceedings New York State Hom. Med. Soc., vol. ix, p. 154.

Dr. Bennett reported a case of *hæmatemesis* stopped by Hamamelis. Previously the man had thrown up three or four quarts of blood. Did not vomit after taking the *Hamamelis*, although he died in three weeks. Ibid., p. 49.

A case of *phlebitis* cured by Hamamelis after other remedies had failed is given. Ibid., vol. iii, p. 186.

Dr. Raue recommends it in *intestinal hemorrhages.* Also for *hæmorrhoids;* see his work on Pathology, p. 291, for indications in that disease. Also for *hæmatemesis,* see p. 254. Also for *hæmoptysis,* see p. 192. His indications for these and other hemorrhages are, where they assume the passive form.

Dr. Lilienthal, of New York, has used it in dysentery, phlegmasia alba dolens, and in placenta prævia. In cough he furnishes the following indications for its use: "Cough from varicose condition of the throat (an examination shows fulness and enlargement of the superficial veins); constant inclination to a hacking cough; hæmoptysis, active or passive, venous blood, and comes up into the mouth without coughing, and scarcely any effort; tickling cough, with a taste of blood in the morning on awakening."

Dr. Wilson, of Moorestown, N. J., has used it in passive hemorrhages successfully.

Dr. D. E. Gardiner, of Bordentown, N. J., uses it in hemorrhages of a venous character; used it successfully in a bad case of epistaxis.

Dr. Hunt, of Camden, N. J., used it, in drop doses, on a minister who had had several severe hemorrhages from lungs; it acted promptly, also relieved dyspnœa. He has used it successfully in many cases of sick headache. In a case of a lady who dreaded to become pregnant because she was so troubled with piles after confinement, being confined to her bed for four months after delivery of her last child, from this cause, under allopathic treatment. In the succeeding confinement, Dr. H. attended her, and after delivery made an examination, and found hæmorrhoids as large as a walnut. He gave the fluid extract in this case, applied to the piles on linen cloths. In nine days the pain was entirely gone; in fourteen days she was able to walk about her room. In addition to her hæmorrhoidal trouble, she was dropsical during gestation. After confinement, and while using the Hamamelis, passed a great deal of urine—passed two gallons of urine in one day—greenish in color, and offensive in odor. She felt very well afterward.

Dr. Hunt, in another case of hæmorrhoids, occurring after miscarriage, painful, but not bleeding, experienced immediate relief from external application of the fluid extract. He considers great prostration from small loss of blood to be a characteristic indication for Hamamelis in hæmorrhoids.

Dr. S. E. Allen, of Trenton, N. J., reports curing spermatorrhœa with Hamamelis, after phosphoric acid and other remedies

had been given unsuccessfully. Obtained his information from hearing the provings in this article read before a society. Cured three cases with it.

Dr. A. B. Lippincott, of Salem, N. J., has a sister who uses it successfully in bronchial hemorrhages. He also had a case of a lady over 60 years old, who had hemorrhages for 20 years, sometimes every month. Gave her the 200th potency a year ago; since then has had no hemorrhage.

The writer has tried it in very many cases, oftentimes without special indications. In many instances the relief has been very marked and lasting; in some cases no relief ensued upon its exhibition.

In a case of leucorrhœa in a young married woman, accompanied with great tenderness of the vagina, causing pain during coition, the mother tincture gave prompt relief from the vaginismus, and relief which was permanent; it also benefited the leucorrhœa. She had been using Pond's Extract previously, but it did not have one-quarter the effect on her that the mother tincture produced. (McG.)

In another case of vaginismus in a married woman who had two children, the effect of an application of the mother tincture diluted in water, 10 drops to the ounce, was, immediate relief. So great was the relief in this case, that in less than three days that which had always caused her intense pain, now gave her pleasure. This relief also was permanent. (McG.)

In a case of sore nipples, the tincture diluted as above gave immediate relief, and, after three or four applications, so hardened the tissue that no pain ensued upon her suckling the child. In nearly every case the tincture gave relief. (McG.)

In a case of hæmorrhoids in an elderly gentleman, sore and very painful, the mother tincture applied on cloths to the piles gave relief which was permanent. (McG.)

In a case of swelling on the perineum, near the anus, it gave no relief, nor did any good. (McG.)

In a case of muscular rheumatism following diphtheria and ulcerated sore throat, where there was intense aching and soreness in the thighs and anus, the mother tincture, diluted as above, gave instantaneous relief to the muscles of the thighs, but only very little relief to the muscles of the anus. (McG.)

In a bad and protracted case of varicose ulcer at the ankle, in a lady aged 65 years, it strengthened the tissue, and before the wound broke out it gave some relief; but after the skin became broken, and the wound open, it gave no relief, nor would any other application tried before or after the Hamamelis afford relief. The pain in this case was intense.

APPENDIX.

DISCUSSIONS.

[First Day—Morning Session.]

S. LILIENTHAL, M.D., New York: Dr. Dake has accused me wrongly. I do not object to re-provings, *per se*, but to his scheme for a college of provers, which I regard as Utopian. Our Materia Medica is defective chiefly in the want of groupings of symptoms. We are not able to tell how the prover felt in every respect from day to day through the provings; but the head symptoms, for instance, are isolated, and we are not able to tell what other manifestations were associated with, preceded, or followed them. Dr. Dake complains that our symptoms have been taken from animals, and from "Tom, Dick, and Harry," concerning whose condition of health we know nothing. He desires perfectly healthy men and women as provers. His provers must be fed upon a certain plan, no stimulants of any kind are to be allowed, and their blood is to be kept pure by every possible means. Now, I have assisted at several provings, but I would not wish for such provers as Dr. Dake wishes to have. I am subject to very severe headaches, but if in the course of a proving a headache is produced which is altogether different to that which is habitual to me, have I not a fair right to attribute it to the drug I am taking? I use stimulants in moderation, and I smoke cigars. If I were to change my habits in these respects when making a proving, my symptoms would certainly be unreliable; for the very change in my mode of life, the withdrawal of accustomed stimulants, would of itself produce a train of symptoms. You can scarcely find a man in the land who has not some irregular habits, and as for perfectly healthy women, they are almost unknown.

The fault is not so much in the provers as in ourselves. We are too apt to take symptoms that are not fully indorsed, and consider them as reliable; but if we were to have a high standard for our symptoms—say, for instance, that they should be manifested in twelve or fifteen provers—we would be less often led astray. But even the most insignificant or apparently trivial symptom should not be despised, as it may lead to the selection

of a remedy which will make a brilliant cure. And if one of these apparently trivial symptoms be repeatedly verified in practice, it becomes greatly increased in the degree of its reliability, and takes rank with the symptom that was repeatedly produced in the provers. Our patients are thus always proving for us. And we do not need as provers persons who are perfectly healthy —and who are very hard to find—but we need simply the men and women of the day as we ordinarily do find them. And these will be the best provers, since they resemble, in their natural conditions, when not suffering from pathogenetic symptoms, the natural conditions of the masses when suffering from diseased states and symptoms. I am in favor of new provings, and of re-provings, but I am of the opinion, as I before stated, that Dr. Dake's scheme is Utopian. I hope Dr. Wells will speak on this subject.

P. P. WELLS, M.D., Brooklyn, N. Y.: Mr. President, I have been a student of the homœopathic Materia Medica a good many years. I have studied it earnestly, and with an interest that belonged to no other study; and when my friend Dr. Dake alludes to the labor with which it has been recorded, I thank him for testifying to that fact, and which gives me very great pleasure. It is worthy of arduous study, cannot be pored over too much, and there is no danger of over-estimating its value. For thirty-five years I have been in the way of hearing of its imperfections, which seems to be a matter easy to be talked about. But let these imperfections be brought forward and produced to us in tangible shape, and when we know what they are we will be able to correct them. I would not accuse my friend by indefinite assertions, but if he were guilty of a crime, I would specify it and charge it to him in plain English.

The Materia Medica which has been given to us by the fathers of Homœopathy should be studied until it is comprehended, and the facts which it gives us should be carried to the sick-room, to the bedside; and the facts of the sick man should be studied until they are comprehended, and then these two sets of facts should be compared, the specific quality of the sickness with the specific quality of a drug which produces the similar facts. Prescriptions thus made will not disappoint.

If we are to improve homœopathic practice, it must be done by improving that which lies at the base of it, viz., the Materia Medica. If there be chaff mixed with it let it be excluded, but let it first be shown that it is chaff; but let no man take upon himself to decide that this or that is chaff, and should be excluded; for what may be to him as chaff, may be a well-substantiated fact; and what to one man may appear to be a trifle, may

to another man have been the means of making brilliant cures. There can be no objection, of course, to our taking out of the Materia Medica that which is false, if it be abundantly proven to be false.

In regard to the matter of re-proving, I would ask, Why re-prove? A truth is a truth—when once discovered. If it be discovered by one man, it is just as true as if discovered by fifty; confidence may be increased if forty-nine others have observed it, but that does not alter the nature of the truth. If the re-provings contemplated are for the purpose of finding new facts, new truths, I for one will certainly not object; but elaborate attempts have been made already to re-prove some of our old drugs, and I am not aware that these attempts have added an iota to our power to heal the sick. But if this scheme of re-proving is for the purpose of inducing the Institute to discard that which we have used so long, and done so well with—that which has carried us so triumphantly through so many perilous places—I do not believe it will be a success.

CONRAD WESSELHŒFT, M.D., Boston, Mass.: As a former member of the Bureau of Materia Medica, I ask your indulgence for a few minutes, in order to attempt to clear up a misunderstanding which seems to exist between what appears to be two growing parties. There has been a claim preferred here for some time, that the only way of purifying the Materia Medica is by re-proving; while there are others who hold to the opinion that the best method of purification is by verification of the symptoms at the bedside. Now, there are really no such two parties, and the question is merely one of practicability. Dr. William E. Payne has been quoted as opposed to the re-proving of the drugs of the Materia Medica. I know Dr. Payne very well. I have had the honor of working with him as a member of the Bureau of Materia Medica for several years, and he has been a faithful member of and worker in this Institute. We are indebted to him for a number of excellent provings, and he would be a man to be depended upon to furnish a good and a reliable proving were he to undertake to make one. He instituted a plan for the improvement of the Materia Medica by verification of symptoms at the bedside, which was partially carried out by himself and some others; but the work failed for want of support. The trouble was this, that Dr. Payne organized his plan without corresponding with other members of the bureau, ascertaining their views, and endeavoring to devise a scheme with which all would co-operate; just as another member of the bureau has presented a plan for the regeneration of the Materia Medica by another method—that of a college of provers—without con-

sulting in advance his colleagues of this bureau. I am satisfied, however, that Dr. Payne is really not opposed to the re-proving of drugs, and equally sure that Dr. Dake is not opposed to clinical verification of symptoms.

In regard to the plan proposed by Dr. Dake for regenerating the whole Materia Medica by re-proving, I am satisfied that, so far as the United States are concerned, it is a matter of impossibility for this generation, and perhaps for the next and the next, even if it were possible to get one generation after another to keep on with the work which we might start now. It could not be available to us, therefore; and however willing we might be to co-operate, and however ready to lay the corner-stone of such a college of provers, we could not have the hope that it would be useful to this generation. No, gentlemen, we must learn to use what we have. We know it is bad; we acknowledge that it is replete with errors and trivialities, and we do not need Dr. Dake or any one to tell us that it has its shortcomings; but, as has been already said, let our Materia Medica be brought here, and let those who can, point out to us the exact errors and trivialities, and we will wipe them out.

Former bureaus of Materia Medica have tried, according to the best of their limited ability, to do the work of purifying the Materia Medica according to a method recommended by Dr. William E. Payne, and which he called "Verifications of the Materia Medica." The work was necessarily slow, and yet something was accomplished even by the few men who engaged in the work. And it was proven that had more, many more, engaged in it, there would have been in course of time a verification of the true symptoms of the remedies, and an expunging of the false symptoms, or those that were after much trial proved to be false. I find myself unable to believe that the Materia Medica can, or rather that it ever will, be purified by the method proposed by Dr. Dake; but in the method of *Verifications* we can go on, as we must do, using that which we have, and yet be working in the matter of purification all the while. To Dr. William E. Payne belongs the credit of this method, specimens of which have appeared from time to time in the *Hahnemannian Monthly* and other journals, and in the *Transactions* of the Institute. I hope that the work he, and others with him, have already done, will not be wasted, but that the members of the Institute will join in and assist in the verification of the Materia Medica.

J. C. SANDERS, M.D., Cleveland, O.: It may not be expected of any one who understands so little of Materia Medica to say much upon this important question; but I would like to make inquiries of Dr. Dake, the suggestor of this interesting

proposition, on a few points. First. At what points he expects to have this college of provers established? Assuming that it is in his mind that the college shall have one definite location, I would ask him, then, will such a place represent the physiological life possible everywhere? And again, he will doubtless have a limited number of professors or provers. I would therefore ask him, if he believes that twelve or twenty-four men and women represent the physiological life of our humanity? And again, doubtless the mode of living, diet, etc., in this institution, will be strictly regulated and enforced.

Now it seems to me, Mr. President, that the points I have raised offer insuperable barriers to the success of the contemplated institution; not to its establishment, but to the acceptance of its results. I have no objection to any organized or systematized means of improving any department of medicine; but I object to the work of this college being recorded and regarded as ultimate to the profession.

As regards this proving process of which we have been talking, I feel, in common with every man and woman interested in Materia Medica, that there are parts of our provings that are weak; and yet, notwithstanding this feeling, I say, who is the man or woman who dares use the pruning-hook to any of the provings that have been handed down to us from the fathers of homœopathy or the provers of these times? Dr. Dake has taken exception to some of the symptoms in Dr. T. F. Allen's work on Materia Medica. Now, who shall say that the criticism is not weaker than the original proving? These symptoms, which are by some persons stigmatized as trivial and valueless, as chaff, are often the very symptoms that lead to the selection of the homœopathic remedy. I believe the majority of the profession will sustain me in this assertion. Not long ago I was consulted in my office by a little miss, who, after relating some of her symptoms, said: "Doctor, you may think it strange, but I am very anxious to get rid of a sensation as if I had a hair on my tongue, and I have been spitting at it, and hawking at it, and washing at it, but I cannot get it away. What is it?" "Have you not a hair on your tongue?" I said. "No," she said; "you can look for yourself." I did so, even with a magnifying-glass, and could discover nothing to account for the sensation, which she averred was very distinct. It occurred to me that Natrum muriaticum presented a similar symptom, and I gave her a single dose of that medicine in the thirtieth potency. Although the symptom had been persistent for over a month, it entirely passed away after the medicine was given. Now, a reader coming across this symptom while reading or studying the pathogenesis of Na-

trum mur., might think and say that it was trivial and valueless, yet here it was the key to the remedy which cured the whole case.

WILLIAM EGGERT, M.D., Indianapolis, Ind.: If I were to express my views on this subject, Mr. President, I should simply recapitulate what has been already said. Although I should rejoice to have all our remedies re-proved, yet I regard it as impracticable—at present at all events—and not only impracticable, but I may say impossible. I would ask my friend Dr. Dake if he would expect Aconite, for instance, to produce similar symptoms in the North as in the South, in the East as in the West? I take it that a provers' college located at one point would be of little use to us.

J. C. BURGHER, M.D., Pittsburg, Pa.: Being under the impression that there is a misunderstanding in reference to the whole subject of re-proving drugs, I wish to make a few remarks. Commencing where the last speaker left off, in reference to the effects of drugs in different latitudes, I would ask: Were not the provings of Hahnemann all made within a very limited space? If we get the proper symptoms of a drug, it seems to me, sir, it does not matter whether the provings were made in the torrid, the frigid, or the temperate zone; whether they were made in an atmosphere impregnated with miasmata, or pure and free from morbific influences. There is certainly a misconception in the minds of some, that the provers' college is to do away with part of the Materia Medica. Some gentlemen say: "Point out the imperfections of the Materia Medica to us?" I would answer, that is just what we propose to do by re-provings. We do not now know exactly what these spurious symptoms are, but re-proving the drugs will show them to us. I have heard but one person, I think, claim that our Materia Medica is perfection. Dr. Sanders seems to be of the opinion that it is as good as it can possibly be. But if the Doctor had taken the symptom he related—that of a sensation as though a hair were upon the tongue—as the sole guiding symptom or key to the selection of a remedy, he might just as well have chosen Silicia, which has the same symptom recorded in its pathogenesis. The Doctor made a lucky hit, and that is all there is about it.

I do not mean to say that this scheme of establishing a college of drug provers ever can or will be carried out; but if we can get twelve, or twenty-four, or more provers to institute regular provings of our drugs, I am at a loss to see why the provings cannot be better made, and the results more accurately, systematically, and scientifically recorded, in a regularly organized

institution appropriated for the purpose, than by having the provers scattered here and there over the country.

DR. I. T. TALBOT, Boston, Mass.: It gives me great pleasure, Mr. President and gentlemen, to see so much interest manifested in this subject. It is a subject which every one of us has felt a difficulty in grappling with. The faults and imperfections of the Materia Medica are such that we have all longed for perfect work; but there have been longings for a perfect man for the past two thousand years or more; and we are as likely to find the former as the latter. I believe that if we could have such an organized body of men and women provers as Dr. Dake contemplates, competent for their work and with a competent master at their head, we could get as good a Materia Medica as we now have, and perhaps a better one. Certain it is that materia medica cannot be properly constructed of desultory observations by persons unaccustomed to observe; certain it is that "proving" a medicine does not simply consist in recording such sensations as the prover may have while taking a certain drug; and certain it is that there are few persons could take drug after drug, and define accurately the effects of each, and eliminate the effects of each separately and distinctly. There is a genius in the matter of selecting and discriminating the effects of drugs, and no man ever had this genius in a higher degree than Hahnemann. When we speak of re-proving the Materia Medica, and of casting aside the old—with all its faults and all its virtues too—it seems to me we are contemplating a very bold step, and one which at the end we might find was not justifiable. But there are things which we can do, and which we should do. We should not take the Materia Medica left us by Hahnemann, and use it year by year, and add nothing to it, or do nothing tending to advance it towards perfection. We must avail ourselves of this day's knowledge of physical diagnosis—in his time so little understood—and add it all to our Materia Medica. We must carefully examine the effects of drugs upon the various organs and tissues of the body, and make accurate and scientific observations of their effects upon the secretions and excretions; and in fact we must take all positive knowledge of drug action attainable through any and all means, and add it all to our Materia Medica. This is the ground that we should stand on. Not to throw away what we have, but to add to it, and improve it in value as much as we can, and thus bequeath to those who come after us the same Materia Medica we received, greatly enlarged and improved. If this enlargement and improvement can be made by a college of drug provers, as proposed by Dr. Dake, or by the system of *verification*, as proposed by Dr. Payne, why

should any one object? The point is to improve our Materia Medica and make it more useful. Do not let us do as the old school does, throwing away volume after volume always for the newest. Let us take the old work and add to it, and improve it in every way; just as our dictionaries are made. Who would think of writing a dictionary of the English language *de novo*, with the works of Webster and Worcester extant? Did these gentlemen ignore all dictionaries that had preceded theirs? I think not; they took what they found, and enlarged, improved, revised, and corrected. Let us do so with our Materia Medica, by adding to it all scientific truth that may be of avail for our purposes.

WILLIAM H. HOLCOMBE, M.D., New Orleans, La.: Mr. President, as I am wholly unaccustomed to public speaking, I must beg the indulgence of the house while I make a few remarks. It is an old saying, that truth is always in the middle. I think that the two parties that seem to be springing up on this subject are both right. They are like the two knights who saw the shield from opposite sides. The one declared it was silver, the other gold, and they fought about it, and when their fight was over they found that the shield was both gold and silver. I am decidedly in favor of the new provings, but I regard with great admiration the old Hahnemannian Materia Medica. I am in favor of the pathological element in the provings as the basis of the Materia Medica, and I love to hunt with the greatest minuteness the rarest symptoms—even that of a sensation as if a hair were on the tongue. The thing with me is, to find the connection between the symptom and the pathological cause; to find when that symptom of a sensation as if a hair were on the tongue is valuable and when it is not. It is a symptom of Natrum mur., of Silicia, and of other drugs. I want to know what its connection is with some disturbance of the brain, stomach, kidneys, or other organs. And this, in my opinion, can only be discovered by repeated provings, and by repeated comparisons of various provings, new and old. Dr. Talbot uses an excellent illustration when he refers to the making of a dictionary. We cannot make a perfect Materia Medica in one generation. It is a work of ages. Let us try to look one hundred years ahead, and imagine what will be the condition of things then. The people of those days will look at our great dictionaries as curiosities, and will wonder at the thousands of to them curious words they contain. Possibly they will look at our Materia Medica much in the same way, and wonder at its imperfections. I approve of a college of drug provers. I do not care where it is located, because I think man is the same

everywhere. I do not agree with Drs. Sanders and Eggert about the physiological life of man being so different in different localities. If this were true, we would be obliged to have an English as well as a German Aconite. I believe that man is the same throughout the world. We can cure the fevers in the East Indies and the West Indies with the same Aconite that Hahnemann proved.

S. R. BECKWITH, M.D., Cincinnati, O.: During my experience as a surgeon, I have had much to do with the use of drugs, giving them nearer their crude state, perhaps, than many or most other homœopaths, and in larger doses. I have always recognized as a fact that drugs produced primary and secondary effects; the primary effects being produced by the more powerful doses, while the latter and finer effects of the drug are produced by the more minute doses. But, notwithstanding these secondary effects being thus produced, as it were, to show the finer shadings of drug action, I am of the opinion that some of the shading in the homœopathic Materia Medica is entirely too fine; that there are, in fact, many symptoms recorded that are extremely foolish, or at least seem to be so to my mind. Some of our provings seem to be carried to the verge of, if not entirely into the domain of etherealism or spiritualism. The minds of some of these provers seem to be very expansive, and they can see things that no one else could see, and they can see them larger and more distinctly than any one else can. Some time ago I was in company with two gentlemen, who were describing to me what they had seen. One of them said the water was sixty feet deep, and so clear that he could have seen a sixpence at the bottom of it. The other declared quite as positively that the water was not more than ten feet deep, and he could not have seen a half dollar if it had been lying on the bottom. I cannot comprehend how the thirtieth attenuation can produce pain in the right finger or the left side, in the hip, or in the little toe; but the prover with a large imagination feels these pains five or six times, or fancies he feels them, and down they go in the record as part and parcel of the pathogenetic effects of the drug being proved; and we are asked to accept them as genuine symptoms. If any word is said about trivial symptoms or spurious symptoms, some one will say: Who dares to purge the Materia Medica, or pronounce any symptom spurious? We have a gentleman in the West who is constantly proving drugs, and proving them "faster than a horse can trot;" and if he goes on, it will take volumes to contain all his provings. He has got a mind surpassing that of Hahnemann in the matter of provings.

It will be well for us to inquire, Mr. President, what position

we occupy towards Science. We recognize the law of cure and the single remedy. But it is time that we were done prating about the single and only law of cure; as if Nature in her great wisdom had given us but the one law. Is there a man among you who does not agree with me in this?

A VOICE: Yes! yes!

DR. BECKWITH: A member of this Institute, in the hearing of this body, reported that a stream of blood as large as his arm, flowing from the uterus, was controlled by the two hundredth potency of Belladonna. Did any one believe that story? Did any of you take time to reckon what number of arteries and veins would be required to throw a stream of blood as large as that? And does any one believe that such a stream of blood, if it could be made to flow from the body, could be arrested by the two hundredth of Belladonna, or of anything else? Is it not high time that there was some effort made to put a stop to such absurd utterances in the name of Homœopathy? The fact is that we have proved the homœopathic law, and know it to be a law of cure; but we have other laws of cure also. Every man who has used a mustard plaster knows that it relieves, and sometimes cures his patient; but it certainly does not operate by the principle of the homœopathic law. We have a right to claim that we have the most generally applicable, the most useful, and the most nearly perfect law of cure now known; but we have no right to claim anything more than that. It does not take a man with much far-sightedness as to the future to see, that in times not now far distant the practice of medicine will be known by the name of Science, and not by that of Homœopathy. It becomes our duty to banish from our school everything that will not bear the test of science.

My friend, Dr. Dake, offers us a plan for the proving of remedies upon a scientific basis. I am not prepared to say that his plan is or is not perfect in all its details; but, at all events, it is a step in the right direction, and if carried out will surely accomplish something for our good.

R. LUDLAM, M.D., Chicago, Ill. (having been loudly called for): It seems to me, Mr. President, that there is one point in which our Materia Medica is very defective, that may be remedied by some such plan of re-proving as Dr. Dake proposes. I refer to the effects of drugs upon women, and more especially upon their sexual system. Our provings are certainly defective, so far as they relate to the diseases peculiar to women, and by some such scheme as that of my friend Dr. Dake, these defects may be remedied. And in my opinion, Mr. President, the proving of remedies upon women can only be done in one way in order to

produce trustworthy provings, and that is, by having the provings made by persons specially selected on account of their fitness, and made under the eye and hand of competent persons, men or women, or both. I would not have provings made upon women indiscriminately, as my friend Dr. Lilienthal does, relying on their report of their sensations, which may be reliable or may not.

A VOICE: Will the Doctor explain what he means by the word reliable? Does he mean that the woman may not know whether she has such and such a symptom or not?

DR. LUDLAM: I mean that women in general are apt to be mistaken about their sensations, or to be misled by them, so that they might not be able to discriminate between what was fanciful and what real, or to report their symptoms with such accuracy as is desirable in provers. Now I am of the opinion that regularly instituted provings upon women hereafter to be made, would be much more valuable and reliable, or trustworthy, which is a better English word, if the women provers were carefully examined by a compentent specialist prior to the commencement of the provings. We cannot expect to find absolutely healthy women, but the specialist should be satisfied that those who are about to engage in the experiment of proving a drug should be in a measurably good state of health, and he should know exactly what condition of disease existed, if any. Then we would be able to tell with a very good degree of accuracy, as the proving progressed, what symptoms of the woman were fairly attributable to the action upon her organism of the drug she was taking, and what were fairly attributable to the abnormal condition of her sexual organs. We should know, for instance, whether a leucorrhœal discharge of a certain kind and color was due to the action of the drug, or of the previously existing diseased state. If some such means as this were resorted to, in order to amplify and make relatively correct our symptomatology of remedies adapted to the diseases of women, it would be of great service to the specialist, but of still greater benefit to the general practitioner.

[First Day—Evening Session.]

(Dr. T. F. Allen, having moved the acceptance of the papers of the Bureau of Materia Medica, etc., and their reference to the Committee of Publication.)

T. P. WILSON, M.D., Cincinnati, O.: Mr. President, I wish to object decidedly and emphatically to the taking of these papers, putting them into the hands of the Publishing Committee, and having them indiscriminately published with our

Transactions. There is no part of our Transactions which so thoroughly swamps us as the publications of the Bureau of Materia Medica. Masses of provings are sent here without either qualification or indorsement. Dr. Allen has just told us of one comprising one hundred pages of foolscap, and made by a single prover, and we are expected to accept it as truth, and pay for the printing of this enormous mass of possible trash out of the general fund. This will go on, and get worse and worse, if we do not soon put a stop to it. By and by some one will bring us a proving which he has made, and which will cover a thousand pages of foolscap, and he will expect us to print that. I protest against the making of the annual volume of the Institute a hopper into which can be thrown anybody's and everybody's provings. This is the highest court the homœopathic school of medicine has, and it becomes us to set in judgment on this matter, and render a decision that shall be final. I therefore move, as an amendment to Dr. Allen's motion, that the papers be referred to the Committee of Publication, *excepting those that represent provings by a single prover*, and that these papers be referred back to the Bureau of Materia Medica, to be retained by them until a sufficient number of provings have been made to warrant the bureau in presenting them to the Institute for publication.

DR. T. F. ALLEN: I accept the amendment of Dr. Wilson. There are provings here that are very valuable. The proving presented by Dr. Wallace McGeorge is a valuable paper, and is something more than a proving by a single observer. He is a thoroughly reliable man, and a very careful, close, and accurate observer. The provings of Physostigma are by a number of provers. I regard this also as a very valuable paper. These provings should be in the hands of the members of the Institute, and if the Institute does not feel like publishing them, I shall be very happy, indeed, to do it on my own account. I fully agree with all that Dr. Wilson has said regarding the publication of fragmentary provings, or provings by a single observer; but the papers I have just mentioned do not come under these headings. Of the other provings presented, I would leave them to the judgment of the Publication Committee, excepting that I would not in any way recommend the publication in the *Transactions* of the proving of the "*eggshell with the membrane on.*"

(The motion, as amended, was agreed to.)

DR. ALLEN: Now, Mr. President, I should be very glad to hear some remarks on primary and secondary symptoms. It is a subject of importance for our consideration.

THE PRESIDENT: There is yet time for remarks.

Dr. Dunham was called for.

DR. CARROLL DUNHAM: I have nothing to say.

DR. J. P. DAKE: Mr. President, I would like, sir, to make some remarks, not extended, in reply to the general drift of the speeches that have been made here adverse to the sentiments of the paper I presented from the Bureau of Materia Medica. I am afraid that some members of the Institute labor under a misapprehension of my position, and of the views of those who are advocating the proving and re-proving of the remedies of the Materia Medica in a college of drug provers.

The great question for us to consider, involving the principle that should govern in this whole matter is, *What kind of information, with regard to drug influence, is it that we need, as practitioners under the homœopathic law?*

The proper consideration of this question, in my judgment, must lead to the position which I have here assumed.

In practice, when we come to a case of disease, what is the information, with regard to it, that we desire to have, and how do we proceed to obtain it?

We take the symptoms commonly called *subjective*, made up of the narrative of the patient, as to his feelings, abnormal sensations, and sufferings.

We then observe the *objective* symptoms of the case, inspecting morbid appearances, not only with our unaided senses, but also with our senses aided by various diagnostic means.

How is it when we come to a disease of the eye? We not only use our eyes, but also, if the case is obscure, glasses to reflect and magnify, and so light up the regions of disease.

And when we come to affections of the nasal ducts and of the ears, and of the pharynx and larynx, we take the narrative of the patient as to his aches and pains, and various sensations, and inspect the mucous membrane, as far as we can follow it with the naked eye, and then bring into use our speculum, laryngoscope, and whatever other means may have been found useful in exploring those parts, and in the study of their various diseases.

When we come to affections of the chest, beside all the subjective symptoms we can gather, we take in all the objective, listening to the different sounds, not by the ear simply, but by the ear aided by the best conductors of sound.

And in dealing with affections of the uterus, we take the statements of our patient, and make digital examinations; and not satisfied in our diagnosis, go farther, and employ the means now called into use by enlightened gynæcology.

In affections of the kidneys and bladder, we resort almost daily to chemical reagents and the microscope.

Now let us turn to the other side.

The homœopathic law says: *In every case of disease select that remedy which is capable of producing, in the healthy, a similar display of symptoms.*

I now come back to the question, How are we to obtain such a display of drug effects or symptoms as may furnish a likeness of any or of all the groups of morbid symptoms of which we have gained a knowledge chiefly through aids to the senses such as I have referred to?

Am I told that the great law of Hahnemann deals and governs only in the realm of human sensations, bringing into comparison only the subjective and superficial symptoms of the patient on the one hand and of the prover on the other?

Then, alas for Homœopathy! Its narrow boundaries neither call for nor admit the employment of those improved diagnostic tests and means by which the profession is enabled to gain its most certain and important knowledge of disease.

But the law of Hahnemann is not thus limited, but extends its dominion, and calls for a comparison between all the indications of disease in the patient, subjective and objective, discernible by the senses, and by the senses aided by all possible means, on the one hand, and the indications of drug influence in the prover, subjective and objective, discoverable in any way and by any means on the other hand.

It must follow, then, as a necessity, that the same care and the same means be used in the observation of symptoms in the prover as in the patient. If aids to the senses are needed in the one case, they are no less needed in the other.

But were the sentiments of some who have spoken on this floor, and of some who have written in opposition to systematic and thorough provings, true, we should, as practitioners of Homœopathy, dispense with the ophthalmoscope, the laryngoscope, the stethoscope, the microscope, the speculum, the thermometer, chemical tests, and all other improved means of correct and critical diagnosis.

Look through the Materia Medica, and tell me how many of its drugs have had their effects observed and tested by such aids to the senses.

How many, affecting the eye, have shown symptoms such as we may know nothing of save through the ophthalmoscope?

In the case of what drug and what prover has that instrument been employed?

How many drugs have we, affecting the ears, or throat, or larynx, or thorax, or urinary or reproductive organs, to the effects of which, during the proving, diagnostic means have been applied, such as are in daily use among enlightened physicians,

in the investigation of diseases of the throat, the larynx, the thorax, the urinary and the reproductive organs?

Now what I contend for is this, that we should use, in the proving of medicines, whatever means of diagnosis we consider necessary in the examination of our cases of disease. That is a plain proposition; and I defy any man and all men to overthrow it.

And what does it require? Does it allow us to go on gathering up provings, made in utter disregard of its teaching and in defiance of all the requirements of ordinary precision and certitude, in the formation of our Materia Medica?

No, sir! If ever we propose to stand forth before the world, true to the requirements of our great therapeutic law, with our system up even with the march of scientific improvements, we must show that we are in earnest, and ahead of all the medical world in our study of drug effects. We must not rest till our information regarding drug influence is coextensive and parallel with our knowledge of disease. I assert here, and not without shame, that such information, with regard to the drugs now constituting our Materia Medica, has never yet been obtained.

I contend that it is utterly impossible that the necessary tests and examinations should be applied to afford us such information, while provings are made, as in the past, and even now, by everybody, here, there, and everywhere.

And I contend that so great and so necessary a work can never be accomplished, except in an institution such as I have been advocating, where the provers are selected and gathered together, male and female, under the direction of a competent faculty, with all the instruments and all the tests, requisite in tracing and studying drug influences in the human organism.

Let me now be distinctly understood; because some, I feel sure, have to-day spoken against my plan, who have not read the paper unfolding it to the Institute, which I read a year ago, and which was published among the papers of the Bureau of Materia Medica.

They do not seem to know what I am working for, nor to understand my method.

I am opposed to individual and ill-directed effort, such as we have had abundance of already in the proving of drugs. I am in favor of a combined scientific, thorough effort, as set forth in my plan for a college of drug provers.

I have not cast our present Materia Medica away. I consult it daily, making the best use I can of its commingled wheat and chaff, not blind to its defects, having no particular veneration for its origin, and anxious always for something better.

SECTION III.

REPORT

OF THE

BUREAU OF CLINICAL MEDICINE,

L. E. OBER, M.D.,	La Crosse, Wis.
H. B. CLARKE, M.D.,	Salem, Mass.
WILLIAM EGGERT, M.D.,	Indianapolis, Ind.
E. C. BECKWITH, M.D.,	Zanesville, O.
GEORGE A. HALL, M.D.,	Chicago, Ill.
WILLIAM H. HOLCOMBE, M.D.,	New Orleans, La.
WILLIAM H. WATSON, M.D.,	Utica, N. Y.
DAVID COWLEY, M.D.,	Pittsburg, Pa.
BUSHROD W. JAMES, M.D.,	Philadelphia.

TO THE

TWENTY-SEVENTH SESSION

OF THE

American Institute of Homœopathy.

VOLUME I. NUMBER 8.

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LI.

ON REPORTING CLINICAL CASES.

By L. E. Oberr, M.D., La Crosse, Wis.

The value of clinical reports depends in a great degree upon the clearness and correctness of the transfer of the case reported to the mind of the reader. Therefore when the impression thus transferred to the mind gives a clear and correct picture of the case, with all its antecedents, and when the remedy used is selected and applied according to the homœopathic law of cure, the report becomes valuable to the practitioner of homœopathy, a verification or otherwise of the proving of the remedy used, and a means of arriving at the facts relating to the superiority of our system of therapeutics.

I am not disposed to prescribe arbitrary rules which shall be followed by all who report cases; but will make a few suggestions, which we deem important, in order to promote greater uniformity and reliability in such reports.

The record of the case should be made at the time of the examination.

Give prevailing epidemic constitution of the locality in which the patient resides.

Give the age, sex, temperament, constitution, and as much of the previous history of the patient as may have any bearing upon the case.

Give the general appearance and all the morbid symptoms, the time and cause of their remission and exacerbation, the temperature of the body, its maximum and minimum, chills, fever, and

perspiration, the pulse rate and quality; result of a careful physical examination of the heart and lungs, in all cases when those organs are implicated; appearance of the tongue; thirst; character of the secretions; the results of a chemical and microscopical examination of the urine, when any disease of the urinary organs is suspected; location and character of the pains; moral symptoms and sleep.

Sum up and give the diagnosis and prognosis of the case, according to the view of the physician at the time of the examination.

State the remedy selected, and why; the attenuation and repetition of the dose; and a careful record of the progress of the case while under treatment; also all that is known of the result, after the discontinuance of the treatment.

I would further suggest that the examination and record of cases in our hospitals be carefully and fully made and recorded, so that an examination of the hospital books shall readily settle the correctness of the diagnosis of the cases treated, and be a means of greater uniformity in the preparation of statistical reports.

I also suggest that great care and discrimination be used by the editors of our journals in publishing clinical cases, many of which seem to be of less value than the paper on which they are written, and are the means of misleading many in the profession, and of doing more injury to our cause than all that our enemies can say or do against us.

LII.

MENINGITIS CEREBRO-SPINALIS: ITS DIAGNOSIS, PATHOLOGY, AND PROGNOSIS.

By W. H. Watson, M.D., Utica, N.Y.

The diagnosis of cerebro-spinal meningitis is often very obscure. The affections with which it is most liable to be confounded are typhus fever, cerebritis, and typhoid or enteric fever.

It has also been mistaken for tetanus, malignant measles, and hysteria. The writer has seen two cases of this disease, in consultation with gentlemen of extensive practice who had mistaken it for pneumonia.

Although the symptoms vary very much in different cases, and are rarely all present in any one case, yet the peculiar phenomena of the disease are usually sufficiently pronounced to enable a physician of acute discrimination to make a correct diagnosis.

From typhus fever the diagnosis is difficult. The following are the essential points of difference: In cerebro-spinal meningitis the headache is of a more acute character, and persists after the delirium sets in, which occurs at an earlier date than in typhus, and generally commences on the first or second day; while in the latter disease it is of a low and muttering character, and rarely begins before the end of the first week The countenance in the former has not the dull and obtuse appearance so indicative of the latter disease, and the dusky flush of the cheeks, and the weary decubitus upon the back, are also wanting. In the former the tongue is generally moist and soft, the temperature is

lower than in other typhoid or inflammatory diseases, vomiting is frequent and persistent, and the pains in the spine and limbs are sharp, lancinating, and evidently neuralgic; in the latter the tongue is usually dry, hard, and brown, and the teeth and gums covered with sordes, the temperature is higher, the skin is hot, burning, and pungent, vomiting is rare and not urgent, and the pains in the limbs are dull, heavy, and evidently muscular.

From cerebritis, and also from ordinary meningitis, it may be distinguished by the fact of the greater pain and stiffness of the posterior cervical muscles, the rigidity of the large extensor muscles of the spine, the intense rachialgia, and the traction of the occiput downwards, and especially by the very great sensibility of the surface of the body.

From typhoid (or, as it is preferably designated, enteric fever), it would, in the generality of cases, be distinguished by the more sudden accession of the symptoms, and by the absence of epistaxis and diarrhœa. In cerebro-spinal meningitis the petechiæ, when present, usually occur from the second to the fourth day of the disease, while the *taches rouges*, so characteristic of enteric fever, are not present until about the fifteenth day of the disease.

From tetanus it would be distinguished by the fact that trismus is one of the earliest symptoms of that disease. In tetanus also, in the majority of cases, the patient will be found to have sustained a wound; there is an entire absence of cerebral symptoms in the early period of the disease; there is a relaxation of the muscles during sleep, and there is the greatest difficulty in swallowing. Neither spasms nor muscular rigidity are common or conspicuous phenomena of cerebro-spinal meningitis.

Malignant measles would be distinguished by the coryza, the redness of the eyelids and injection of the conjunctiva, the crescentic character of the eruption, and the increase of the fever on the appearance of the rash.

Cerebro-spinal meningitis could only be mistaken for hysteria in its earliest stage, and the further development of the grave symptoms of this disease, as contrasted with the superficial character of those present in hysteria, would soon render the diagnosis easy.

Occasionally the force of the disease falls upon the lungs at

the outset, and the case simulates the most violent pulmonary congestion, with rapid, irregular, and difficult respiration, blue, cold, and clammy skin, and a weak and frequent pulse. In these cases the differential diagnosis is established by the hyperæsthesia of the surface, the irregular rhythm of pulse, the rachialgia, and by the absence of those physical signs which are indicative of disease of the lungs.

In closing the subject of the diagnosis of this disease, we may remark that the *irregularity in the rhythm of the pulse* (now slow, and then quick and frequent, this alternation occurring at very short intervals during the twenty-four hours, and with no apparent reason for the change which is not as characteristic of any other disease), when occurring in *connection with great hyperæsthesia of the surface*, may be regarded as almost pathognomonic.

PROGNOSIS.

The prognosis of these cases is full of uncertainty. While the most formidable often recover under homœopathic treatment, yet those exhibiting the least severity are by no means free from danger. Cases which may appear very slight at first often prove fatal in the end. All cases are uncertain, both in relation to duration and result. When the attack commences with great prostration, coma, and general symptoms of collapse, death often ensues very speedily, without the occurrence of reaction.

Few cases ever recover after severe tetanic symptoms make their appearance. Irregularity of respiration, difficulty of swallowing, great enlargement of the tongue, extensive petechiæ, violent general convulsions, and deep, persistent coma, are all unfavorable symptoms. In France the disease destroyed one half of those attacked; in some parts of Missouri five-sixths died; in Tennessee, three-fourths; in Mississippi, at least one half; and in Alabama, sixty per cent. In some localities the ratio of mortality has been upwards of eighty per cent.

PATHOLOGY.

The appearances after death, in cases of cerebro-spinal meningitis, are as follows: The serous membrane covering the brain

and spinal marrow is found to be the seat of extensive inflammation, which is much more marked in the *spinal* than in the cerebral arachnoid; the dura mater exhibits but little abnormal vascularity; the pia mater covering the hemispheres of the brain is congested, and the large veins in their way to the several sinuses appear remarkably turgid. There is usually an effusion of yellowish or greenish lymph between the arachnoid and pia mater, which is very slight on the hemispheres, but found in greater quantities at the base of the brain, and frequently completely invests the cord in the spinal column. Neither the spinal nor the cranial cavity of the arachnoid contains any of this secretion. In many cases more or less of the substance of the brain and spinal cord is in a state of softening. In every instance, however, the serous membrane seems to be the part principally and chiefly affected, and when the cerebro-spinal axis is affected, it is evidently by a propagation of the disease from its investing membrane. In a very few cases death has occurred so rapidly that there has been insufficient time for the formation of a structural lesion, which is a phenomenon strictly analogous to that which we find in rapidly fatal cases of scarlatina in which the characteristic eruption has not been developed.

LIII.

REPORT OF CASES OF MENINGITIS CEREBRO-SPINALIS.

By George A. Hall, M.D., Chicago, Ill.

The Bureau of Clinical Medicine having assigned to me the reporting of clinical cases of "*Meningitis Cerebro-spinalis*," it would be a dereliction of duty, if I failed to make this report; at the same time I am keenly conscious how very difficult it is to make such a report interesting or even satisfactory.

We all have peculiarities in the management of extreme cases, and may be strongly prejudiced in *favor of* or *against* certain remedies, as they have proved serviceable or otherwise in our employ. It is not with a view of making myself heroic, or the action of any particular drug to appear marvellous, that I enter upon the discharge of this duty, but simply to fulfil the mission assigned me, and thus by adding my experience and clinical observation to the documents of our "Bureau," I may at least furnish food for discussion, if not worthy of digestion.

During the months of February, March, and April, 1870, my field of labor was visited with an epidemic, called in common parlance SPOTTED FEVER. It *was* epidemic MENINGITIS, or MENINGITIS CEREBRO-SPINALIS. In the space of three months I treated 49 cases, of which two died, one a little boy seven years of age, the other a girl of fourteen years. All cases presented great similarity of symptoms, but differed widely in the severity and duration of the disease. They were invariably ushered in with a sense of weariness or lassitude, gastric irritability,

nausea, and slight vomiting. There was also loss of appetite; pain in the head, a sharp lancinating pain, or as some would describe it, a "SPLITTING HEADACHE;" vertigo; dizziness; staggering gait when rising to an erect posture, attended with moderate acceleration of pulse; great prostration in some cases.

The mental aberration was variable; some were despondent and apprehensive; others had low, muttering delirium; others were playful, furious and wild.

The tongue presented a dirty-gray appearance; the surface was contracted, pinched, and pale.

The eyes were slightly pink, pupils dilated; photophobia. In some cases erythema, and clonic spasms.

These are some of the symptoms noticeable in a majority of cases during the prevalence of the epidemic in the winter and spring of 1870.

I will describe a few cases, noting the symptoms and conditions as they occurred, and give the remedies used in each individual case.

The 3d day of February, Ella B., aged 11 years, returned from school, and complained of great weariness, severe headache, and sickness at stomach. Her mother, thinking perhaps the lunch she ate at noon did not agree with her, gave a few doses of Belladonna and Pulsatilla, and placed the patient in bed, expecting the trouble would all subside with a good night's rest.

When morning came, she learned from an older sister that the patient had spent a restless night, and pain in head had continued. Belladonna was again prescribed by the mother, at intervals of one hour.

During the day she complained only of her head and of feeling sick.

At 6 P.M. she was urged strongly to get up and partake of supper. She arose from bed, was placed at the table, but could not eat, nausea and headache being increased by the effort; had a severe spell of vomiting followed by a chill, and trembling or shaking of the whole body. I was called to see her at 8 P.M., and learned the above history of the case.

I found her in bed; pulse 98, full, strong; surface pale, cool. Eyes congested slightly, pupils very large. Sharp pain in fore-

head, and lancinating pain in back of the head; tongue dirty white at the base, margins natural; bowels constipated, there had been no motion for several days; no particular abdominal distension, but slight tenderness on pressure; she was irritable, and disliked to be disturbed.

Her temperament was "*nervous sanguine;*" a bright scholar, and well advanced for her age.

I prescribed Nux and Gelseminum 3d, alternately every half hour until midnight; then Gels. every two hours alone; ordered an enema in the morning, of soapsuds.

The morning of the 5th, at 10 o'clock, I saw her again. Pulse 94; temperature 97½; had rested poorly, tossing and muttering in her sleep; tongue the same; bowels moved freely after enema, at 7 A.M.

Pain in head mitigated, but less inclined to talk; extremities cold; the smell of food was disagreeable; constant nausea, and hyperæsthesia of the whole surface.

Continued Gels. alone every two hours.

Feb. 6th, 10 A.M. Patient lying upon left side; limbs drawn up, and head moderately drawn back. Pulse 98; temperature 97; pupils large; complained of soreness, and when disturbed was very irritable; tongue slightly dry; surface cool; urine normal. Gave her an enema, followed with slight stool. Prescribed Aconite, every hour, in place of Gels.

8 P.M. Found symptoms the same, but increased in severity. Gave Aconite 3d in place of 6th.

Feb. 7th, 10 A.M. Patient still lying on left side; head and extremities drawn back. Pulse 100; temperature 97; during the night had spells of weeping, crying; complained of her head; sighing respiration; clonic spasm of the muscles increased. Prescribed Ignatia 30th and Gelseminum 3d, the former every three hours, the latter every hour between.

For two days following no marked change in her symptoms, save an increased rigidity of muscles, and the appearance of livid spots on the feet and hands, and the extremities generally.

The same remedies continued.

On the morning of the 9th, patient still on the left side; the body the shape of a half hoop; very sensitive to the touch;

could not bear to be handled or moved; margin of tongue reddish, base and centre dirty white; stupid; could not make her understand what was said; the sighing respiration had subsided, but the breathing was still labored.

The livid spots more conspicuous; the pupils not as large as in the earlier stages; the conjunctiva reddish; abdomen contracted; slight subsultus. Pulse 100; temperature 99.

We placed her under the influence of Nux vom. 3d and Atropine 4th dec., alternately, every hour, for 18 hours; then every 2 hours for 24 hours, when the 30th and 200th were substituted for the 3d and 4th, and continued for 48 hours, at intervals of 2 hours.

From the 9th until the morning of the 14th, there had been a moderate improvement in all symptoms; the spasmodic condition was much lessened, the child lying nearly straight in bed; general appearance of the eye and face better; urine had been below normal in quantity, containing an excess of phosphates.

On the 14th it was lighter colored and more abundant. Consciousness was partially restored, but from what we could observe, were satisfied the child could not see. We gave Stramonium 6th, every 3 hours, and Gels. every 12 hours.

On this prescription the patient was continued until the morning of the 16th. The face, which, up to this time, had been contracted and pinched, now showed some puffiness under the eyes; the patient would scream out, and exclaim "SOMETHING STINGING." Complained of stinging pains in different parts of the body.

The forehead and upper part of the chest were bathed in perspiration; the sight was restored. Great exhaustion, and want of appetite.

Apis mel. 3d, and "Chininum ars." 3d, were given in alternation, every hour, for 12 hours, then every 2 hours, for 12 hours. The 17th, 9 A.M., patient no worse; moderate improvement; the same remedies continued.

The 18th. Patient improving. Same prescription continued until the 20th, when I found the patient quite comfortable. She was very hungry, and said she would like some poached eggs. I granted the request, and she had two cooked soft in

hot water, and ate them with a piece of toast. The same afternoon I was called to see my patient, and found her vomiting a bluish-green frothy substance, complaining of great distress in stomach and bowels, and having copious alvine discharges. Pulse small, feeble, 106; surface cold and livid.

Verat. vir. was administered, the 3d in solution every half hour. Warm applications were made to the extremities, and a ginger poultice applied to the entire abdominal and epigastric regions. In a few hours the patient was relieved, and the following morning I found her comfortable. A few doses of China followed the Verat. vir., and on the 24th my attendance ceased, with the convalescence of the patient.

During the treatment of this case, and many others following, I used ginger and mustard externally. The ginger I employed in the form of a poultice; to a teacupful of ginger, I added two tablespoonfuls of syrup, and then hot water sufficient to give it the consistency of thick cream; spreading it upon thin cambric, I would apply it to the spine and extremities, and continue until the external capillary circulation was fully restored, which was made manifest by a bright redness of the surface. The mustard I used in the form of hot packs. I would envelope the entire body in cloths wrung out of hot water medicated with mustard, packing well outside with dry wrappings, when the patient would remain one, two, or three hours, as seemed necessary in individual cases.

The above applications I consider valuable adjuvants in the treatment of this disease.

The diet I believe should be simple, plain, and nutritious; corn-starch, oatmeal, *attrition flour*, beef tea or mutton-broth, and potato-starch, are good. I believe eggs and all food containing a large per cent. of albumen absolutely injurious. In several cases, when eggs and oysters were given, serious gastric and enteric complication followed.

Case 2. Owen W., aged 9 years, had been attending school. Complained several days of not feeling well; appetite poor; severe pain in head at times. I saw him Feb. 9th; found him in bed; pulse 94; tongue slightly coated; surface cool; pupils dilated; a strong hemorrhagic tendency; ecchymosed spots all over

the body; muscular soreness; slight contraction of all the flexor muscles.

The 12th, found his head drawn to the right, and would now not allow it to be moved, resting upon the back. In this position he continued until the 20th, when the muscles relaxed, and convalescence was established.

The remedies employed were, first Arnica, then Bryonia and China, then Rhus tox. and Ignatia.

Case 3. Mrs. B., a widow lady, 30 years of age. Fleshy, full habit; leucophlegmatic temperament.

In January had a severe attack of diphtheria; convalescence slow.

The 24th of February had a severe chill, accompanied with pain in the occipital and sacral regions; pain intense, with chills running down the back. 26th. Vomiting and purging of a dark-green substance; great prostration; surface cold; petechial spots on the arms and limbs. The 27th, she became delirious. Pulse 98, soft; very thirsty. 28th. No better, save that the stools are less frequent; muttering delirium; picking at the bedclothes. Very sore, and would scream upon the slightest pressure; thirst excessive.

March 4th. Slight improvement; less delirium; no stools; tongue, which had been rather dry, is now moist about the margin. March 6th. Partial paralysis of the left side. Secretion of urine scant; a little swelling of hands and face.

March 10th. Rheumatic pains in joints, and a constriction of the upper part of the chest and throat.

March 13th. Appetite returning; no pain, but complains of great exhaustion.

March 28th. Discharged convalescent.

The remedies used in this case were Gels., Aconite, Nux, Ver. vir., Arsenicum, Bell., Bryonia, Apis, Phytolacca, Chininum ars.

LIV.

THE EFFECTS OF MENINGITIS CEREBRO-SPINALIS UPON THE HEART.

By Bushrod W. James, A.M., M.D., Philadelphia.

Remembering that the meningitis under consideration is one produced by a typhus type of disease, and not one brought on by any traumatic lesion of the spinal cord or brain or their meningeal coverings, and that it is not a simple inflammation of these meninges, but in reality a typhus form of fever with these meningeal symptoms, and inflammation as the prominent complication, we will be better able to understand the action of this disease upon the heart, and upon the pneumogastric and cardiac nerves, as well as the production of the intense neuralgic pains about the heart and the bowels, and in other and different parts of the body.

The more recent researches upon the subject of the circulation of the blood, both through the heart and capillary vessels, and the investigations upon the action of the heart and upon the nerve force, show that the heart itself is not absolutely essential to the circulation of the blood; for the circulation of the blood can go on without any impulse of the heart at all.

It is known that the heart is formed in the embryo by the circulation itself; and that after the organization of the heart, which has been given a *form* by the circulation, it then assumes to itself a function, which is that of aiding in the propulsion of the blood through the animal. Dr. Brown-Séquard made a section

of the ventricle of a frog's heart, and, after union of the lips of the cut by means of a clot, the circulation of the blood continued through this part of the ventricle, which was simply large enough to allow the blood to pass through as through a large artery, and with scarcely any impulse being produced by the remaining portion of the ventricle; and yet the animal kept alive, and circulation went on through all the tissues.

Another fact tending to prove that the heart is not always really essential to the blood circulation, is the illustration offered by those cases which are on record called "suspended animation"—which have in some instances nearly led to burial alive—where no action of the pulse or heart is perceptible, nor even of the lungs, and yet the circulation must here have assuredly gone on, otherwise the blood would have coagulated in the vascular system, and of course resuscitation and reanimation would never have occurred.

Ordinary cases of syncope even, and some cases of partial asphyxia, are illustrations of the fact.

This being determined, the following claim of modern physiologists is apparently substantiated, that the chemical changes occurring in the tissues are one main source of keeping the circulation active; and further, as we know that the nerve fibres terminate in the tissues, and transmit nerve *force* not only to the tissues themselves, but between the elements of tissue, therefore the discharge of this *nerve force* is transformed into a *chemical force*, and the activity of this chemical phenomenon, from the transformation of the one force into the other, causes an attraction of the blood at the point of transformation.

The minute nerve fibres terminate in every part of the body; hence this transformation from *nerve* force to *chemical* force is going on through the whole system, and thus is kept up the circulation through all the tissues to which these nerve fibres are supplied, irrespective of the heart's action. The suspended animation cases, and similar disorders in which the heart ceases to beat, in this light can be well explained, and we can see how the circulation is maintained for a time without the heart's action.

In addition to this attractive source of activity of the circulation of the blood, nature has given the human system these pro-

pulsive powers, the heart and arteries, as if to assist this other force in carrying on its duty of keeping the blood in motion.

Thus the heart may be also a reserve power or force to fall back upon by the system, in the event of any serious disturbance resulting to the nervo-chemical force, or acting, it may be, as a balance-wheel, to keep the machinery of life in motion until nature makes the effort to repair the diseased state and overcome the disturbance.

Just here we see this exemplified in the disease under consideration. The disease-producing elements of the typhus petechialis first alters the condition of the blood. This fact is distinctly observed in the pallor and blueness of patients commencing with this spotted typhus fever, now generally denominated cerebro-spinal meningitis.

This is demonstrated also in the frequent hemorrhages that attend the disease.

This changed condition of the blood is made still more manifest later in the progress of the disease, in some patients, where petechiæ come out on various parts of the body, locally or generally. In some it is perceptible quite early after the incipient chill.

There is evidently here a considerable amount of disturbance of the nervo-chemical force, and the heart is called upon to do its entire functional duty in maintaining the circulation until this other force assumes its normal action.

Now the heart and arteries receive a circulation themselves, and are supplied with these minute nerve fibres; consequently they must receive a certain amount also of the nervo-chemical force, and a happy circumstance it is in many of these cases of this disease, that but a portion of this nervo-chemical force is interfered with at one time; otherwise we might have the instant cessation of the two main sources of the activity of the circulation, in which event death would suddenly ensue; and not unfrequently this does happen; and this partly accounts for the great number of sudden deaths that occur when meningitis cerebro-spinalis is prevailing epidemically.

It is a matter of observation on my own part, that for a period of weeks we will have no cases in the city of *sudden* deaths from

what is termed heart disease, and then all at once within a few days we will have reported quite a number of such; and I have invariably found at these times a great increase in the number of cases of the disease under consideration throughout our city.

This I have closely watched ever since the epidemic of spotted fever of 1863 and 1864, which spread over Philadelphia and its suburbs.

While this epidemic was in progress, it was no unusual thing to note in the local columns of the daily papers as many as four, five, or six cases of sudden deaths from "heart disease," the individuals dropping down dead in the street; and many other instances occurred in the practice of physicians, where some of their patients, apparently well, would be suddenly carried off, or else attacked with a chill, and in twelve, sixteen, or twenty-four hours be in articulo mortis.

These sudden deaths, I think, were partly due to the sudden or somewhat rapid cutting off of the entire nervo-chemical force, not even leaving enough to maintain the functions of the heart; so that most of these cases did not or do not really die from "*heart disease*" itself, but from the prime disease, the spotted fever, cutting off the force which maintains the circulation through the capillary system of bloodvessels.

If then we have but a portion of this nervo-chemical force interrupted, we have local symptoms exhibited, as in the numbness of certain parts of the body and tingling in the hands and feet, or in different parts of the dermoid tissue of the body, or we will find the intense neuralgic pains that occur in the bowels, or in the stomach, or in the chest, in the head, or directly around the heart itself, where the pain assumes the form of an angina pectoris, and recurs in frequent attacks.

Suppose we have this interference occurring so as to affect the pneumogastric nerve. What symptoms would we generally look for under such a circumstance? First of all we would find nausea, or the irritation may even be sufficient to cause at once emesis, and we may also have a deathly sick sensation, or a hollow empty feeling in the centre of the epigastrium, from the influence exerted directly, or by reflex action, upon the solar plexus of nerves.

From the pulmonary branches being affected, either directly or sympathetically, we can explain the dyspnœa or constriction about the chest, or cold feelings in the same region, and even the hemorrhages from the lungs that so frequently attend the spotted fever.

From the cardiac branches, in a great measure, we will get the feelings of faintness, palpitation, irregular action of the heart, sudden jerkings of the heart, and many other symptoms which the patients say are indescribable, and sensations as if they were dying.

This symptom, in which patients say they feel as though they were dying, no doubt comes in a great measure from the partial interruption by the disease of the nerve force throughout the general nervous system. Different causes, however, may also be the origin of it.

Other very important physiological facts indicate the ease with which the heart may be influenced through the nervous system.

The cerebellum is one of the main points from which the nervous force is produced; much of the pain and distress attending the disease is referred to the occiput, and thence forward from the base of the brain to the frontal region.

To the region of the medulla oblongata and spine are referred the burning sensations, pains, etc.; likewise showing the inflammatory condition produced by this typhus disease, when it locates itself in some of the more vital parts of the system.

It has been found that when the par vagum is galvanized, the irritation is transmitted to the heart, and this irritation causes a cessation of muscular action; the heart therefore becomes instantly flabby, and then stops beating, notwithstanding the flow of blood into its cavities.

Now then, the walls of the heart being thus flaccid and motionless, the organ soon becomes distended; at the same time the blood is still pouring into it, because it does not force the blood out, while the chemical force and the activity of the general nervous system continue, and still can be kept up by the electric current.

The nerve force also is maintained; still we may have death resulting instantly. But this occurs from quite a different cause

than the one to which we have previously alluded. The heart is now filled with blood, consequently none is being thrown into the lungs, so they must necessarily become emptied, and the stasis of blood in the great central organ of circulation suddenly deprives the system of its natural life current; hence vitality ceases. Physiologists tell us that the cause of this cessation of the heart's action is an arrest of the activity of the cells of gray matter located in the heart's structure and also in the ganglionic masses of these cells situated around the heart, or in the neighborhood of it.

The rhythmical movements of the heart therefore are principally maintained by the activity of these cells, and the small ganglia made up of masses of these cells of gray matter. Now the irritation by electricity of the par vagum, or even of the medulla oblongata from whence this nerve originates, being set up, is transmitted immediately to the cells of gray matter in the heart's structure and to these ganglionic masses, and renders them instantly inactive. The main source of activity of the heart being thus cut off, the pulsations of the heart, as a consequence, become passive.

It does not require a great deal of pressure or irritation of the medulla oblongata or of the par vagum to cause the stoppage of the heart's action, for experiments have been performed, proving that a simple pricking of the medulla will arrest the movements of the heart, as much as the destruction of the whole medullary structure.

It is not difficult then to conceive how very easily a sudden arrest of the heart may take place in meningitis cerebro-spinalis, through the congestion or the inflammation of the meningeal membrane at this point; especially when such congestion or inflammation has become so great as to produce pressure, and consequently an irritation, at this very vital point of the nervous system.

Prof. Charles Roguet established the law that the phenomenon of arrest, or what is usually termed inhibitory phenomena, occur always through the same mechanism.

"An irritation starts from a part which can convey nervous force, and the nervous force so conveyed after that irritation,

reaches the cells of gray matter which were active, and those cells of gray matter are immediately stopped by that peculiar influence."

There is another phenomenon of arrest which has not as yet been fully studied or developed; one which is most inimical to life, and the action of which seems to be but little understood. It is the sudden cutting off of nutrition in the tissues; that is, the interchange between the tissues of the body and the blood is arrested by some irritation, probably a very small one, to some part of the nervous system, so that the oxygen of the blood does not seem to be given up to the structures, and the effete materials from the tissues are not taken up and carried away by the blood; and these results exhibit themselves in the presence of red blood in the veins instead of dark blood.

Whether this occurs through the arrest of activity of cells of gray matter, or other cells located at the extremities of the nerve fibres, or just how this result is produced, is unknown. The fact alone has been determined, and the consequences are very serious when it does take place over the whole body at the same time. Should it be local or only partial, the degree to which it extends of course may vary the seriousness of its effects upon the system.

This nutrition or interchange between the blood and the tissues must be maintained, otherwise life cannot go on; and if the nervous irritation is such as to cause its instant cessation, it will speedily result in death unless it be re-established.

Meningitis cerebro-spinalis produces speedy collapse in many cases; probably not always so profound or rapid as that from a sudden blow, violent emotion, or from a wound, or any physical shock, or even mental or nervous irritation.

But patients with this disease in a few hours are found in that prostrated state which physicians call collapse, and in this condition we generally have an interference with the normal action of the heart, fluttering sensation, palpitation, sinking feelings in the region of the heart; while the pulse, which in ordinary inflammatory fevers will run up to 120 or more, will in this disease in the collapse stage often run down as low as 40 beats per minute. Many such instances I have met with, and some have gone as low as 36; and yet life is not necessarily taken away in

such patients. It exhibits, however, the influence of the disease in causing a partial arrest or retardation of the activity of this organ.

If the flow of blood through the capillaries is partially arrested, we have an increased pressure in the arteries, and hence a lower pulse.

M. Marey, after years of observation, arrives at this conclusion, that when the heart has to overcome resistance to any degree its beats become less frequent, and when resistance in the arteries from blood pressure diminishes, we have an increased frequency of the heart's pulsations. One of his experiments to prove this it may be well to quote.

"In order to study the effects varying the arterial pressure in a heart detached from all exterior nervous influence, he removed the heart of a tortoise, and fitted to it artificial circulatory apparatus formed of caoutchouc tubes, in which circulated fresh calf's blood. From a raised reservoir the blood was brought by a siphon into the veins and the auricles; passing from the ventricles to the arteries it was forced into the elastic tubes, which conveyed it back to the reservoir. These last tubes represented the arteries and small vessels, and various apparatuses could be applied, in order to study the physical phenomena of this circulation. Notwithstanding a high temperature, the circulation continued over five hours, and the following experiment was frequently repeated.

"Whenever the pressure of blood in the arteries was increased, either by contracting the orifice of outflow or by raising it, the heart's movements were retarded; whenever the pressure was diminished, the beats were accelerated."

So it appears that this disease can affect the heart in various ways:

1. By interrupting the nervo-chemical force.
2. By arrest of nutrition between blood and tissues.
3. By checking the activity of the cells of gray matter in or about the heart.
4. By direct or reflex nervous impressions.
5. By indirectly changing the pressure of blood in the arteries.

There is often valvular derangements, produced as exhibited in the irregularity of the heart's pulsations and the abnormal

valvular sounds, but through just what direct means such results are brought about is uncertain. It is most likely either through a disturbance of the nervo-chemical force, or an arrest of the activity of some of the cells of gray matter from the irritation produced by the disease in the brain or spinal cord, or else from the altered condition of the blood allowing depositions to form on them. If these causes are removed, the abnormal action of the heart naturally ceases, and the pulse returns to its usual pulsations, unless permanent structural derangement has taken place.

As spotted fever often produces an exudation upon the pia mater of the brain and spinal cord, an irritation is set up in the nervous system from its presence and its pressure, and especially so if this exudation assumes a purulent character.

This irritation extending to the nerves of various organs, explains the many strange and unaccountable symptoms which result in this disease. When this exudation or formation of pus takes place in the brain, it is found chiefly at the base, especially about the optic nerves, pons varolii, and medulla oblongata, parts which are considered as extremely vital.

Pathologically the brain is generally found somewhat swollen, and in some intances small spots or centres of softening are observed, as post-mortem appearances reveal.

The pathological investigations of the heart in fatal cases of this disease, unfortunately have not thrown much light upon the lesions directly to be attributed to the malady itself.

So far as can be discerned, very little or no change has occurred in this organ, and yet the heart symptoms are sometimes the most troublesome and annoying the patient has to bear. The fact also of the blood becoming considerably changed in its character, and the interruption to the capillary circulation which must necessarily take place, noticeable in purple spots, the petechiæ or the mottled appearance of the skin, or the large ecchymosed patches which sometimes appear, or the bluish tinge or leaden pallor of the whole surface of the skin, which almost invariably attends an attack of this disease, would all lead us to anticipate considerable pathological derangements of the heart, or some of its parts.

Heart Sequelæ.—One of the most frequent sequels of the dis-

ease under consideration is angina pectoris. This resultant affection is strictly a nervous one, and the pain truly of a neuralgic character. The cardiac plexus being connected with branches from the great sympathetic nerve and branches from the pneumogastric nerve, naturally transmit irritations to the heart from other localities, and unite the heart closely with the other organs, and it sympathizes in its action with their derangements.

That this disease should give rise to the acute pains about the chest, and especially in the region of the heart, and also the cramplike feeling and constriction which are usually met with in cardiac complications of this typhus fever, is not surprising.

The angina pectoris may be connected with suddenly fatal symptoms, or it may only produce alarming symptoms at the time; while in other cases it may continue to be a troublesome annoyance to the patient, for years after the recovery from meningitis cerebro-spinalis itself.

These intense neuralgic pains that attend the disease, sometimes from its incipiency, are very deceptive to the physician, for when occurring in the cardiac region, they frequently simulate organic heart disease, and interrupt the regular action of the heart in various ways; but autopsies in a number of such cases have not exhibited any marked structural lesion of the heart or its valves.

The same remarks will apply to the abdominal neuralgias affecting the solar plexus, and one or more of its outbranching nerves, which produce symptoms analogous to those of intussusception of the bowels.

Several cases during the epidemic of 1864 came under my observation, where the diagnosis was boldly proclaimed as this latter affection, and the cases proving fatal, a post-mortem examination was had, and the physicians in charge were much mortified to find no interlocking of the intestines, and no inflammation whatever, and consequently no visible cause for the intense agony and local distress and the vomiting and sinking of the vital powers which had been present; the symptoms being nothing more than what we may term typhus neuralgia.

The angina pectoris to which we have referred is a neuralgia of this type.

The abnormal action of the heart, therefore, usually takes place through the irritation of the original disease in the spine or brain being transmitted through the nerves supplying the heart. And as the cardiac plexus appears to be the centre of all sympathetic nerves of the heart, this is the point to which the original irritation is transmitted, and the reflex irritations also coming from other organs.

Some of the acute heart pains are doubtless due to the reflex action, as is likewise the nausea and vomiting, heartburn, hollow empty feeling in the stomach, and the deathly sick fainting symptoms which so frequently attend after slight motion.

The disease varies in intensity in different temperaments and patients; hence we have a wide difference in the kind of pains and sensations about the heart in different individuals.

Heart clot occasionally results, owing to the changed condition of the blood which the disease produces. Especially is this the fact in cases that have lost considerable blood from the epistaxis, hæmoptysis, or other hemorrhages that are so frequent a concomitant of the malady.

Hydro-pericardium, and even anasarca, are not unfrequently found as sequelæ.

It is generally due to this hydræmic condition of the blood, to which we have just alluded, and not from any inflammatory condition of the pericardium or heart itself. In fact there is a great absence of inflammatory symptoms in or about the heart and bloodvessels in meningitis cerebro-spinalis.

Hypertrophy and dilatation of the heart might be expected to result in those nervous temperaments, when the disease produces much disturbance of the circulation, or where there is considerable cardiac nervous derangement manifested in its progress.

Palpitations of a nervous character are most generally a very troublesome symptom, owing to the irritations which start from the spine and brain.

Treatment.—With regard to the management of the heart symptoms of the disease, we have but a suggestion or two to offer, as treatment has no doubt been thoroughly written up by the paper on that part of the subject of this bureau. These cases in which the heart is quickly involved, or becomes affected even

later in the attack, I have endeavored to show, are very serious ones, and require a prompt remedy and one that will act quickly, and such a one I wish here to offer. It was suggested and brought into use by the late Dr. David James, early in the epidemic that occurred in Philadelphia in 1863 and 1864. I soon adopted it; and in both his and my own practice when like other physicians in the city, we were losing one-half of our cases of this disease, whereas the mortality after the adoption of the alcohol treatment was only one death to every sixty cases of the disease treated, and this extended over some hundred cases.

As soon as the nature of the disease is determined, commence with pure deodorized alcohol, 95 or 98 per cent., or as pure as you can get if from your pharmacy. Put two teaspoonfuls in eight tablespoonfuls of water, and give a tablespoonful every half hour until free perspiration results, or the violent symptoms abate; then give doses an hour apart, and decrease gradually the quantity of alcohol, and then use in conjunction with it your selected remedy for the symptoms in toto, after rescuing the patient as if it were from sudden death.

If you commence with it in the incipient stage of the disease, you arrest it with wonderful promptness. If the disease has progressed some hours, or in the milder form even a day or two, it may save the case, but it will most likely run into a more lingering condition, like typhoid fever, and last for days or even weeks, with many annoying heart symptoms.

Among the remedies that may be looked over for heart symptoms of this disease, I may mention Arsenicum, Bromine, Cocculus, and Digitalis.

LV.

SPONTANEOUS HYDROPHOBIA.

By O. P. Baer, M.D., Richmond, Ind.

I beg leave to offer a few remarks upon a case of what might very properly be termed

Spontaneous hydrophobia, which occurred in Richmond, Ind., last summer, in a respectable mechanic, some 40 years of age. He was a well-to-do citizen, having a wife and three children; nervo-bilious temperament; habits good, uses neither tobacco nor liquor; has enjoyed pretty good health, so far as known to the physician in attendance. Had always been of a quiet, rather reserved disposition, is industrious, not disposed to read or study much; and seemingly has no inventive genius, hence was not subject to attacks of what, in daily parlance, is denominated a "*brown study.*"

This man was noticed by his immediate family to give slight evidences of irritability and eccentricity some *ten* days previous to their being compelled to seek medical aid. This state of things rapidly grew worse from day to day; new symptoms, new phases, and new developments presented themselves each day, until, upon the tenth day from the first manifestation of trouble, he became so utterly ungovernable, medical advice was called in. Dr. J. Howells, a homœopath, was called, who gave me the following detail of symptoms: On entering the room where the sick man lay, he was accosted by a horrid howl, curse, and a low

guttural growl, as of a wild beast when approached by a stranger at his cage. With fists tightly clenched, he was striking at every person approaching him; spitting right and left with a vim, as though some one had forced him to swallow some nasty drug. Face red, or even purple, as though in great rage, with hair standing in all directions, and eyes wild and suffused with scalding tears, and the mouth besmeared with whitish and greenish tinged slime and froth, mixed with saliva, quite thin, and profuse at times. Hands and feet cold and livid, while his head was hot and flushed, as with fighting rage.

This state lasted some *ten* minutes, which seemed an age, when a comparative calm ensued. He now, apparently exhausted, dropped into a restless, stertorous sleep, with slight trembling of the nerves and muscles, accompanied with occasional jerks and sudden starts. Pulse weak, 110 to the minute, somewhat irregular in force and volume. Abdomen rather full, though not distended, without soreness or meteorism. Had been purged by the family through his own wishes; and as to the urine, the quantity was greatly diminished, and highly colored. Other particulars were not given by the attending physician.

After half an hour's uneasy rest, he roused somewhat disturbed at his surroundings, seemed estranged, and as it were *abashed*, as though he had been caught in bad company; and after a short conversation with him of a very laconic character, the doctor offered him some Belladonna, in water, but as soon as presented he shook all over, and spasmodically pushed it away, and at once commenced spitting most violently in all directions, followed rapidly by striking, biting his clothes, and tearing them in shreds, and trying his best to break the cords which secured him to the bed. Clonic spasms now fully set in over his whole person, with growls, barks, shrieks, cries of terror, dread, and fear. Now he shudders, froths, rattles, suffocates almost unto death, and a perfect pallor looks out from every feature. He tries to swallow, or rather there is a fruitless gurgling sound, attended with intermissions, as one strangling from fluids. Some gurgling, clucking, and puffing kept up nearly the entire time of the spasm.

Occasionally the patient would rise upon one or other of his elbows and mutter incoherently, with a trembling voice, though

harsh and defiant. None of the muscles seemed rigid at any time, though constantly in motion. Pupils were somewhat *dilated* while directly under the influence of the spasm, and he would frequently snatch at things apparently before him, and seemed excited when his object was not obtained by the sudden grasp. Time and again his whole system would be inordinately exercised because he had failed in catching the object of his venom. He then gradually softened down again, and looked around in apparent haste and anxiety, and dropped to sleep.

Just at this crisis, as drowsiness was approaching, the doctor essayed to give a liquid dose of Bell., but no sooner was the liquid in the mouth than spasmodic contraction of the throat promptly followed, and blowing from the mouth, without contracting the orifice, but spitting from a wide-open mouth, sending saliva and froth in all directions; and after a few short moments nausea and even vomiting followed, vomiting of green, frothy, vitiated bile. This condition of things lasted with ever varying phases for more than three days, with steady increase of all the prominent symptoms; the patient evidently growing weaker and more irritable, notwithstanding the persistent use of Bell., Hyos., Ignatia, Amm. carb., and Nux. On the morning of the fourth day I was consulted, and after hearing a minute description of the case, I settled it in my mind as a clear case of spontaneous nervous hydrophobia, so closely resembling pure *rabies*, as readily to be mistaken for it, and, indeed, I learned that a prominent allopath had been called by some of the friends, the day before, who pronounced it a hopeless case of hydrophobia, because of his horridly wild look, and his utter repugnance to water and liquids of all kinds. When fluids were brought into his presence, he would fairly shudder and quake; and frantically exclaim, "Away! away! away! You'll kill me." Dryness and constriction of the throat, with great difficulty of swallowing, seemed constantly present. In fact, deglutition was painful even while swallowing solids, causing more or less distortion of the face. Bright colors also affected him to a certain extent. He also rubbed his hands together a great deal, and often clasped them between his knees, and then back of his head, and complained of his head a great deal; but when asked where it ached, would say

"all over." When asked how it felt, would say *"it's bursting."* All inquiries relating to his having been bitten proved that he had been free from anything of the kind. Had never been bitten by any animal whatever. I therefore prescribed Hydrophobin, 30th dil., a dose at the close of every spasm, and strange to say, as desperately severe as all the symptoms were, with the apparent utter hopelessness of the case, he had no more spasms after the first dose, and in twenty-four hours was quite rational and comfortable. He seemed quite thirsty and hungry, and drank and ate moderately without any unpleasant symptoms whatever. Soreness, aching, and stiffness of all his muscles lasted for several days, which finally were cured by Merc. vir. 30th. Thus ended most favorably one of the severest cases of nervous excitability imaginable, resembling in all its phases and aggregate symptoms rabies canina, presenting every phase of canine madness, so much so that all who saw him feared he had been bitten unknowingly, or had forgotten it. But the very fact of his rapid and complete recovery strongly militates against all probability of its being hydrophobia proper, but it shows us one important fact, and that is, that Hydrophobin is an excellent remedy in such extreme cases, particularly where there may be doubts as to the origin of the disease. But while we fully recognize Hydrophobin as the direct agent of cure in this terrible case, yet the very grave question pertinently arises: How is it that a substance which is the mere *effect* or *outgrowth* of *rabies canina* could possibly act curatively? It is not the disease, nor yet the cause of it. Like Tussilago, Secale, etc., it is simply the result of morbid action, no doubt metamorphosed into a fit pabulum for evil spirits. For surely evils flow into us as well as out of us. The venom of the Ophidia is not at all analogous in the least to Hydrophobin (or *rabid froth*), but in every essential entirely different. Venom is the natural secretion, as a defence or weapon in case of assault. It is a positive agent, a cause and not an effect. Ophidian venom may be, and no doubt is, as Professor Higgins positively asserts, the true specific for serpent bites and their consequences, and to me it seems perfectly legitimate and right.

But the use of Hydrophobin, I confess, savors somewhat of

Isopathy; and would it not favor, yea justify, the use of tuberculous matter in phthisis, cancerous matter in carcinoma, syphilitic virus in syphilis, etc. These analogies cause repugnant feelings, but when we contemplate the close of life among our beloved friends, grief takes fast hold upon us, with great anxiety for prompt aid; and like dying men, we readily grasp at straws, and often seek remedies, and effect cures, not written in our medical calendars nor dreamed of in our philosophy.

LVI.

WHICH MEDICAL PRACTICE?

AN ANALYSIS OF OVER EIGHTY THOUSAND CASES.

By E. M. Kellogg, M.D., New York.

"What physician shall we employ?" is a question which to-day agitates thousands of households. Of course, he must be well-educated, well-bred, intelligent, and sympathetic; but to what school of practice shall he belong? Shall he be an allopath or a homœopath? All have heard of these rival schools of medicine, and many cherish violent prejudices in favor of one or the other. But have they any good grounds for their opinions? Can they give a reason for the faith that is in them?

Instances are constantly occurring, where, when illness attacks a member of a family, and the disease assumes a threatening type, the hearts of all are sorely distressed by the doubt as to whether the right treatment is being employed. Such cases we have frequently witnessed; and few scenes are more heartrending than that of a mother at the bedside of a sick child, racked with agonizing doubts as to whether she ought or ought not to change her physician, and send for one of the other school of practice.

Let us therefore weigh the merits of these two medical systems in the scale of practical results; and, laying aside all theories and preconceived ideas, let us judge of the tree solely by its fruits, and decide in favor of that medical practice which is shown by actual facts to cure most pleasantly, most safely, most speedily, and most surely. That is the system, of course, which we all want to use.

First, then, other things being equal,

Which Cures most Pleasantly?

On this point there can be little hesitation in deciding. When we consider the harsh treatment of the old or allopathic practice, its vomitings and purgings, its bleedings and blisterings; when we remember that for hundreds of years the expression "a dose of medicine," has been synonymous with something nauseous and repulsive; when we think of the millions of poor sufferers down whose unwilling throats disgusting drugs have been violently forced, we ought to be thankful that a new method of practice has arisen, which lightens the sufferings of the sick by making medicines tasteless, if not even palatable. Under the old school system, it requires, as has been aptly remarked, a great effort to take down a dose of medicine, and a still greater effort to keep it down; while under the homœopathic practice it is shown that torturing the nerves of taste and smell forms no necessary part of drug-administration. There can be no question, therefore, that the homœopathic treatment is the pleasantest.

Which Cures most Speedily?

Had we no positive facts on this point, we might argue, with much show of reason, that the homœopathic practice would cure most quickly, because it does not, with its small doses, so undermine the strength of the patient as does the allopathic practice, with its larger and more exhausting doses. But we are not left to theory and inference; for we can refer to actual data for the means of comparison.

The average duration of diseases in general in the allopathic hospitals of Paris, Berlin, Göttingen, and Stuttgart, as compared with that in the homœopathic hospitals of Vienna, Munich and Leipzig, has been published by Dr. Kurtz in the *Hygea*, vol. 18, part 2. This gives the mean duration of hospital diseases to be—

Under allopathic treatment, ...	28 to 29 days.
" homœopathic treatment, . . .	20 to 21 "

Investigating the comparative duration of particular diseases, and taking pneumonia as an example, we find, upon the authority of Louis, the eminent French physician, that its mean duration,

under allopathic treatment, is 21 days; while Tessier and Henderson, equally distinguished physicians, give statistical proof that its mean duration, under homœopathic treatment, is only 12 days. This one disease is quoted only as a fair sample of all; were it necessary, equally conclusive evidence could be adduced in regard to others. Judging, then, by actual results, we find that the homœopathic cure of disease is *not only the pleasantest, but also the quickest.*

Which Cures most Safely?

That which gives all the medicine it dares, or that which gives as little as possible? Is it safe to run the risk of drug-poisoning from large doses? Is it safe to take so much medicine that years may be required to eliminate its effects? Is it safe to give doses which, if they do no good, are sure to do harm? Is it not altogether safer to give doses which are not in themselves poisonous, and upon a method which is constantly seeking for the least amount which will be curative?

Suppose we knew positively that a certain disease could be cured by either one of two equally powerful drugs, one in a large dose, the other in a small dose, which one would common sense select? That one, of course, which would cure with the least risk of leaving some ill effect behind, and with least disturbance of the general health. Allowing, then, that the two systems are equally efficacious in curing, we must decide that the homœopathic method is not only the pleasantest and quickest, but also the safest.

And now we come to the most important, the vital question of all,

Which is the Surest to Cure?

In other words, what is the comparative mortality under these two methods of practice?

In settling this momentous question, we can collect and compare the results of allopathic and homœopathic treatment in hospitals and in private practice; and if they unite in a verdict, we can have no hesitation in accepting it as the truth. Upon the hospital statistics we shall be brief, as they have already been

published on various occasions. Suffice it to say, that the official reports of 21 European allopathic hospitals show that, of all their patients, 11 per cent. died; while similar reports of 15 European homœopathic hospitals show that only 6 per cent. died. Again, the records of the various European hospitals set apart for the exclusive treatment of cholera patients during the epidemics of that disease occurring from 1831 to 1854, show that the average mortality from cholera in the allopathic hospitals was 54 per cent., while the average mortality from cholera in the homœopathic hospitals was only 27 per cent., or exactly one-half as great. Very similar comparative results have been shown in the public treatment of other severe and dangerous diseases, such as pneumonia, typhus fever, etc., proving the vast superiority of the homœopathic practice in hospitals. But these results are not as pertinent and important to our inquiry, as are the authentic results of the two systems of treatment in the private practice of our own country. And to these let us give especial attention.

The principal cities of the United States have each now a Board of Health, which, among other duties, takes cognizance of all the deaths occurring within its jurisdiction, and keeps an official record of the same, with full particulars of nativity, age, cause, and place of death, and name of attending physician. These official records we have now for some years been engaged in analyzing, in order thereby to obtain positive data of the comparative mortality occurring in the private practice of all homœopathic and allopathic physicians in acknowledged good standing. We have totally excluded from our consideration all deaths occurring in hospitals; for, inasmuch as a very great proportion of these public institutions are exclusively under the charge of allopathic physicians, it would be manifestly unfair to include the deaths occurring therein, without any corresponding mortality to offset them on the homœopathic side. We have also thrown out all deaths occurring from stillbirth, accidents and violence, as having no bearing on the question of medical treatment. We thus obtain a comparison of the mortality in *private medical practice only*—the practical point at issue.

Our researches cover New York, Boston, Philadelphia, Newark, and Brooklyn—five of our largest cities, and extend over

the last four years; thus giving a mass of results so large and so similar in the conclusion they present, that we must needs accept them as approximately, if not absolutely, true.

Let us first take the mortality of

NEW YORK CITY.

Year.	Number of physicians.	Number of deaths.	Average deaths to each physician.
ALLOPATHIC.			
1870, . . .	944	14,869	15.75
1871, . . .	984	15,526	15.78
Total, . . .	1928	30,395	15.76
HOMŒOPATHIC.			
1870, . . .	143	1,287	9.00
1871, . . .	156	1,243	7.97
Total, . . .	299	2,530	8 46

Here we find the startling revelation that in New York City the average allopath loses nearly sixteen patients annually, while the average homœopath loses less than nine! This, too, when both are practicing side by side in the same locality, subject to exactly the same epidemic, malarial, and climatic influences.

Let us now take up the mortality record of

BOSTON.

Year.	Number of physicians.	Number of deaths.	Average deaths to each physician.
ALLOPATHIC.			
1870, . . .	218	3,872	17.76
1871, . . .	233	3,369	14 46
1872, . . .	233	4,575	19.63
Total, . . .	684	11,816	17.27
HOMŒOPATHIC.			
1870, . . .	40	402	10.05
1871, . . .	44	363	8.25
1872, . . .	54	446	8.26
Total, . . .	138	1,211	8.77

Here again we are confronted with the same astounding result; the allopathic losses by death are to the homœopathic more than seventeen to nine!

How can we account for this? Is there any fallacy in it? Do these figures tell the whole truth? In reply, this question suggests itself: Do the homœopaths treat as many patients, proportionately, as the allopaths? What is the ratio between the number of patients treated by the two schools, and the number of deaths given in these tables?

This query, which at first sight seems vital, proves, upon examination, to be of little or no practical importance. We could not honestly and fairly compare the mortality occurring in the practice of any two physicians as a test of their relative success, unless we really knew how many patients each had treated during the year; but when we compare the two schools of practitioners in a mass, thus including hundreds, and even thousands, of every age, and grade, and degree of ability, we are safe in assuming that the average homœopath on one side treats as many patients per annum as the average allopath on the other; and that this is a fair assumption will be readily believed by any one who will compare the apparent business success and thrift of the two classes of physicians. Consequently we believe and maintain that these tables of mortality, as they stand, are a fair exponent of the relative merits of the two medical systems.

Let us now take the comparative mortality of

PHILADELPHIA.

Year.	Number of physicians.	Number of deaths.	Average deaths to each physician.
ALLOPATHIC.			
1872, . . .	655	12,468	19.03
HOMŒOPATHIC.			
1872, . . .	168	2,162	12.87

This fatal year shows the same wonderful disparity; allopathy losing 19, where homœopathy, under precisely the same circumstances, loses less than 13!

An old school physician, in trying to break the force of such figures as these, once said to us, "Our mortality is larger, because so many of your patients, when they get desperately sick, send for an allopathic physician and die on his hands, thus swelling our mortality list unjustly." To this we replied, "That is a rule which works both ways, as we know from actual experience; but allowing, for argument's sake, that you are right, how many more do you think go over to your practice from ours, under such circumstances, than come from you to us? twice as many?" "Yes," he answered, "I should think that would be a very fair estimate." "But by your own showing," said we, "the balance is against you; for here (in New York City) your school numbers six times as many practitioners as ours; accordingly, to keep the account even, six of our patients ought to die on your hands to counterbalance every one of yours that dies on our hands; and yet you claim but two! So, if there be any force in this point, it is altogether in our favor."

But let us now look at the record of

NEWARK, N. J.

Year.	Number of physicians.	Number of deaths.	Average deaths to each physician.
ALLOPATHIC.			
1872, . . .	77	2,121	27.54
1873, . . .	77	1,185	15.39
Total, . . .	154	3,306	21.46
HOMŒOPATHIC.			
1872, . . .	13	168	12.92
1873, . . .	16	153	9.56
Total, . . .	29	321	11.07

An average allopathic mortality almost twice as great as the homœopathic! How can this additional evidence be explained away? We have heard it urged that homœopathic physicians, as a rule, are called upon more frequently than their allopathic brethren, to prescribe for trivial ailments, and that thus their time is taken up with cases that rarely become serious and en-

danger life. The unsoundness of this charge is apparent when we reflect that the physician of the family attends to all the cases of illness that occur in that family; and the reason that the homœopath seems to have more trivial cases to attend can be found in the fact that he does not often convert a trivial case into a serious one. Those physicians who have practiced for years on both systems universally attest that, though they now, as homœopaths, visit daily more patients than they did as allopaths, they are much less frequently called out at night to look after the disturbing effects of medicine given during the day. Of course they have fewer serious cases, because they do not make them serious, and consequently they have fewer deaths.

Last of all, we come to the mortality of

BROOKLYN.

Year.	Number of physicians.	Number of deaths.	Average deaths to each physician.
ALLOPATHIC.			
1872, . . .	317	7,636	24 08
1873, . . .	333	7,181	21.56
Total, . . .	650	14,817	22.79
HOMŒOPATHIC.			
1872, . . .	84	976	11.62
1873, . . .	92	916	9.95
Total, . . .	176	1,892	10.75

Or an allopathic mortality more than double the homœopathic, in proportion to the number of practicing physicians! Can any more evidence be needed? Are not the comparisons of five cities enough? especially when they unite in telling the same story so emphatically!

There is one extenuating point as regards this very damaging exhibit of the results of allopathic practice, and but one that we are aware of, and that lies in the fact that the clientage of the homœopaths, as a rule, is composed of the higher and more intelligent classes, who enjoy better dietetic and sanitary advantages. A smaller percentage of their patients live and die in tenement houses; in a word, they are less exposed to the ills which

poverty and crowding engender. But this will not explain the difference in hospital results, nor will it do away with the enormous discrepancy in mortality in private practice. The statistics of the various city dispensaries (and those who die in their own homes under the care of dispensary physicians *are* included in these reports) show that the homœopaths do attend a fair share of this class. Thus in New York City, where the homœopathic physicians are only one-sixth as numerous as the allopathic, official reports show that the seven homœopathic dispensaries prescribe for one-fourth as many sick poor as do all the allopathic dispensaries.

We very frequently hear it said that homœopathic treatment is good for children and in slight ailments, but that more heroic treatment is necessary for the severe forms of disease to which strong men are liable. To throw some light upon this point, we have checked off, in the medical statistics of Brooklyn and Philadelphia, all the cases which have died from some of the more common acute diseases. And due allowance being made for the respective numbers of physicians, we find the ratio of deaths under the two systems to be as follows:

Diseases.	Deaths.	
	Homœopathic.	Allopathic.
Bronchitis,	48	100
Cerebro-Spinal Meningitis,	44	100
Cholera Infantum,	64	100
Croup,	37	100
Diarrhœa,	35	100
Diphtheria,	63	100
Dysentery,	39	100
Erysipelas,	33	100
Inflammation of Brain,	69	100
" Bowels,	33	100
" Lungs,	39	100
Scarlet Fever,	69	100
Small-Pox,	61	100
Typhoid Fever,	88	100

It is worthy of special note, that in regard to small-pox, we know not only the number of deaths, but also the exact number of the cases treated by both schools; for the Health Board requires a report of every case, whether fatal or not. In this dis-

ease, therefore, we have the precise ratio between cases and deaths; and the result confirms the accuracy of the general statistics already given.

In whatever way, or under whatever circumstances, a practical comparison is made between the schools of medicine, a similar result is obtained. We can but refer to the fact of the acknowledged success of homœopathy in veterinary practice; and the late epidemic horse-distemper, or "epizootic," added fresh testimony to its superiority. But nowhere have its merits been more markedly shown than in the records of those life insurance companies which have made a medical classification of their risks. The last statement of the Homœopathic Mutual Life Insurance Company, of New York, exhibits this very clearly; and all these facts form an array of testimony which cannot fail to convince any impartial investigator.

By way of conclusion, now let us look at the *grand total.* Adding together the comparative statistics already given of the five cities of New York, Boston, Philadelphia, Newark, and Brooklyn, we have this result:

4071 *allopathic* physicians report 72,802 deaths.

810 *homœopathic* physicians report 8116 deaths.

Or, judging from a total of over 80,000 cases, the average allopathic physician annually loses by death more than 17 of his patients, while the average homœopathic physician loses only 10.

Or, had all these 80,918 cases been treated homœopathically, upwards of 32,000 lives might have been saved to their families and the world. What a startling commentary is this upon the dominant practice of medicine! And yet with what self-conceit does the old school bar its doors against the homœopathic physician, refuse to meet him in consultation, and brand him as a quack! Such a cumulative mass of statistics (the accuracy of which is proven by their slight individual differences), gives us a result so positive and overwhelming, that it can neither be denied nor explained away. All sincere searchers for the truth must yield to the "inexorable logic of facts." And these facts indubitably prove that the homœopathic practice cures most pleasantly, most speedily, most safely, and most surely.

APPENDIX.

[First Day—Evening Session.]

WILLIAM EGGERT, M.D., Indianapolis, Ind.: The gentlemen who have witnessed many cases of cerebro-spinal meningitis, know full well what a powerful enemy they have to deal with in it. I believe too much attention cannot be given to the treatment of such a malady; and it is obvious, after listening to the papers read here to-night, that there are considerable differences of opinion as to what is the best method of treatment to be pursued. I have listened with great pleasure to Dr. Hall's paper, but at the same time I would not adopt, and do not approve, his treatment; and, moreover, I do not think that he is justified in resorting to such treatment. It is true that in the city of Indianapolis, where I live, there has been no epidemic of severe cerebro-spinal meningitis, and it is true that I have not seen such severe cases as the Doctor describes, but I have had a number of cases to treat, nevertheless—in 1856, some seven or eight cases. These cases were all treated by me with the single remedy in high potencies, no external applications being used, and not one was lost. When we consider the results the allopaths have obtained from purging, mustarding, poulticing, and blistering, disastrous enough, we cannot help feeling surprise that Dr. Hall obtained such good results as he did. But his good results were due to the homœopathically indicated remedies which he gave, and not to the external applications which he made; they were cured homœopathically, and in spite of the external applications.

HENRY C. HOUGHTON, M.D., New York: I wish to say a few words on the subject of the diagnosis of meningitis cerebro-spinalis. It has been our fortune to meet with quite a large number of cases of this disease in connection with the clinics at the New York Ophthalmic Hospital, which will aid in explaining, to a certain extent, the ready relief that follows the administration of homœopathic medicines in many of these cases. Sometimes we find an almost miraculous return from symptoms of the most appalling gravity to rapid convalescence. In some of these cases, I have no doubt, the supposed cases of meningitis cerebro-spinalis were nothing more nor less than acute inflammation of the

semicircular canals of the ear, with symptoms bearing a very striking resemblance to those produced by cerebro-spinal disease.

WILLIAM A. EDMUNDS, M.D., Memphis, Tenn.: In two epidemics of this disease which occurred in Memphis, in 1871 and 1872, the internal and external use of *Gelseminum* was found exceedingly useful. I have had considerable experience with this remedy, and I ordinarily use it in the lower dilutions, or even as an infusion. And I believe that there are great advantages derived from its use externally, especially in cases of this disease. I have a great deal of confidence in external applications, although they are cried down as not being homœopathic. But every educated and intelligent man will give wide scope to his investigations, and take in the whole field of science, to the exclusion of not one part of it. In treating this cerebro-spinal meningitis, I apply the tincture or an infusion of Gelseminum to the cervical region of the patient, and I believe that very good effects follow. At the same time I administer the tincture or the second or third dilution internally.

J. D. BUCK, M.D., Cincinnati, Ohio: In the papers of Drs. Watson and James, and particularly in the paper of the latter, reference is made to certain effects of meningitis cerebro-spinalis upon the heart. I would ask whether these are suppositious or hypothetical, or whether the statements are made as absolute facts ascertained in the only practical way in which they could be ascertained, viz., by autopsies.

B. W. JAMES, M.D., of Philadelphia: What I have read here in regard to the effects on the heart are absolute facts, or are regarded as such; they are from men who have made many researches, and who have a right to speak decidedly.

DR. BUCK: I may have been mistaken, but I am under the impression that I heard Dr. James, while reading his paper, several times make use of the term "nervo-chemical force." I should like to know exactly what is meant by that, or in other words, I should like to have a definition of the term.

DR. JAMES: I applied it to that force which it seems to me is the mode of nutrition, at the terminal nerve fibrils, when they terminate with and in the minute capillaries of the circulation. It seems to me that there is a change takes place there and then in the kind of force, and the term nervo-chemical force, it seemed to me, expressed the true condition very advantageously.

DR. BUCK: I beg leave to take issue with you on that point. I don't think your position is a good one, or that it can be supported by authorities.

JAMES T. ALLEY, M.D., St. Paul, Minn: It seems to me that the writers of these papers have found that a very large

proportion of these cases occurred among children; but this has not been my experience, as almost all my cases occurred in adults. I have had but about a dozen cases to treat; certainly not more than that number. And most of these cases occurred in persons of a low degree of vitality. I do not wish to go into the treatment of these cases, but would simply remark, that for the conditions for which Dr. Hall used the external applications, and Dr. James the brandy, I gave Gelseminum, and with the best results.

DR. B. W. JAMES: So far as the cases I attended are concerned, a large majority of them occurred in adults. The epidemic I alluded to was a very severe one; the patients were attacked suddenly and with great violence, and the disease seemed to seek its victims mostly from grown persons. The community was filled with alarm at its ravages. I have had a personal as well as a professional experience with cerebro-spinal meningitis, and I can assure you that neither of these experiences is a pleasant one. At the time of this epidemic it was no uncommon thing to see accounts of five and six sudden deaths in the daily papers—of persons dropping down dead suddenly in the streets, in the cars, and in other ways, supposedly from heart disease. For a period of several weeks these sudden deaths occurred at the rate of one, two, and three a day. Some of our physicians died suddenly, who were in attendance on cases of the disease. I have always been of the opinion that these sudden deaths were caused by this terrible epidemic disease, the action of this disease upon the heart being such as to cause such a condition of that organ as leads to sudden death. In some of the cases which occurred during the epidemic referred to, the patients complained of very severe abdominal pains, and other symptoms of such a character that ileus would be diagnosed; and after death the autopsy would show that there was really nothing like ileus, or even inflammatory action sufficient to account for the severity of the symptoms.

S. R. BECKWITH, M.D., Cincinnati, O.: I made some observations on this disease at the Cincinnati Hospital a few years ago. The first case I saw was that of a man, aged about forty, who was sick twelve hours and died. Autopsy showed a high degree of congestion at the base of the brain and upper portion of the cord. In the next case examined, there was considerable serous effusion. These conditions were found in all cases examined, in a greater or less degree. Now, from what I then witnessed, I learned this lesson, viz., that the chances for relieving the patient, when attacked by this disease, are confined almost exclusively to the stage of congestion. If you can relieve and

remove the congestion of the base of the brain, the medulla oblongata, and the superior portion of the spinal cord, your patient will do well enough; but if the means resorted to fail at this stage, and serous effusion and the other abnormal changes run along in the natural order and sequence, not much of anything can be done to save that patient. Now I was much pleased with Dr. Hall's treatment, especially as it fits pretty squarely to my observations regarding the disease. He tries, during the early stages, to keep up the capillary circulation, that the congestion may be relieved. Now what he did then was perfectly sound and scientific, and did not in any way interfere with the very careful internal medication. I have the greatest amount of faith in homœopathy, and in the action of medicines taken internally, applied locally, or administered in any other way, and I do not believe that the action of a homœopathic remedy can be interfered with by anything else that may be done. Dr. Hall gave his remedies judiciously, and applied his local treatment judiciously, and as a result he gives us an unusual number of cases treated, and an unusually large percentage of cures. I do not like to hear this outcry against the means employed by men of our school to effect cures because they do not agree with the notions of certain other men. Dr. Hall's method has been objected to by some, and they have all acknowledged that they have had but a scanty experience in the treatment of the disease, while Dr. Hall's experience has been very great. I was sorry to hear the allopathic school of medicine spoken of so disrespectfully. I think we can do something a great deal better than abusing our neighbors. Let us leave that to them, if they see fit to abuse us; but let us go on and mind our own business, and try to make our practice just what it should be. Let Dr. Hall do what he pleases in the way of making external applications or using adjuvants. He is homœopathic while he prescribes his medicines according to the homœopathic formula. I have no faith whatever in the reputed cures of this disease in twenty-four hours, by high or low potencies, by homœopaths, eclectics, or allopaths, as I know that in the nature of things such cures are utterly impossible. I would just as soon believe the statement, if I heard it made, that a case of malignant scarlatina had been cured in twenty-four hours. Such cases sometimes die cured in less time than that, but cures are not effected so promptly by any other means.

WILLIAM OWENS, M.D., Cincinnati, Ohio: I am surprised that so little has been said about the indications for the use of the medicines and means resorted to by the gentlemen who have spoken on the subject. No symptoms have been given. One

gentleman gives several remedies, and uses local appliances, but he gives no indications for the use of the one or the other; another recommends Gelseminum, but he does not tell us when to use it and when to leave it alone. He just says that he used it in every case. I am perfectly well acquainted with the fact, and I am capable of appreciating it at its full value, that a certain series of pathological conditions and pathological manifestations run through all these cases, and may be taken as indicating a remedy or a course of treatment; but it would be better if we had the shades of difference between one remedy and another better marked out and defined. We know that cases differ and that remedies differ in their actions just as well as they resemble each other; and it seems to me that in reporting the treatment followed for such cases, the report would be much more valuable if we were told plainly for what symptoms to give one remedy and for what to give another. And I don't wish to be understood as referring solely to the subjective symptoms. But I would have as well the indications given as presented by the pathological conditions; that these should be taken into the account as well as the subjective or other objective symptoms. Some years ago I treated a number of cases of this disease, and in its earlier stage, that of vascular congestion, I relied chiefly on Belladonna, Rhus tox., and some other remedies of the same nature, trying to discriminate between the one and the other. I have used the Mygale considerably also, and have had very good results from it. The cases I have treated have been almost exclusively adults.

GEORGE A. HALL, M.D., of Chicago: In reply to the question of my friend from St. Paul, I beg leave to say that in 1870 two-thirds of all the cases I treated were in persons under fifteen years of age, and that in 1871 they were more evenly balanced between adults and children. And in response to my friend from Cincinnati, who last spoke, I would say that I avoided reading my entire paper on account of its length; but had I done so, it would have been found that the details of each case were very minutely given, the symptoms clearly stated, and the medicines given freely mentioned. And in regard to the point raised, that it was difficult to see what effect the external applications had upon the cases to further the cure, I would say that in my opinion they had their effect, and that the medicines given internally had their effect, and that both conspired together to bring about a changed condition and work a cure; and I am of the opinion, from very close observation, that neither would have worked so well alone. I am not disposed to cavil at my friend who gets so much assistance from the moon, or who cures cataract with the

five hundredth potency of something; and I think it is not fair in him to find fault with my treatment *a priori*, especially since it was largely successful, and he acknowledges that his experience has been very limited.

DANIEL HOLT, M.D., Lowell, Mass.: I arise to ask a question in regard to the use of alcohol by those gentlemen who have had a good deal of experience with zymotic diseases. We all know that in epidemics there will be cases when, within twelve hours of the development of the peculiar symptoms of the disease, the patient will die under any treatment, the action of the heart being overcome by the poison. The patient is frequently found by the doctor in this condition, and with these symptoms.

Now alcohol comes in, perhaps not as a homœopathic remedy exactly, but it tones up the system or supports it against the violent attacks of the powerful and profound poisoning.

This is the ground I take in my paper on alcohol, that in those great disasters in medical practice, such as result from great injuries, railroad accidents and the casualties of war, a few doses of alcohol, given, perhaps, as Dr. James recommends, viz., one-eighth alcohol and seven-eighths water, will bring up the vital forces and improve the condition most wonderfully. You get the tonic, bracing, exhilarating effects of the spirit by such doses, without the narcotic and baneful effects. I can imagine that in such a disease as cerebro-spinal meningitis, when the action is as sudden and as painful in some cases as that resulting from railroad accidents, alcohol will be a very valuable agent in exciting the action of the heart and giving general tone to the system. I would recommend Cimicifuga as a remedy in this disease, especially for the early stage, or stage of congestion.

T. L. BROWN, M.D., Binghamton, N. Y.: I would like the gentlemen who speak so confidently about cases cured by this and that medicine, to stop and ask themselves the question whether it is not possible that nature really cured, while they were asleep, perhaps. They give their medicine, and they attribute all good effects to its action, if there are any. If there are no good effects, or there are bad effects, another medicine is given, and the last one given before improvement begins gets the credit of having caused the cure.

T. P. WILSON, M.D., Cincinnati, O.: I wish to ask Dr. Eggert whether he has cured a case of cataract with the high attenuations?

WILLIAM EGGERT, M.D.: Yes, sir.

DR. WILSON: Will the Doctor tell us what kind of cataract it was that he cured?

DR. EGGERT: I cannot answer that question, sir.

DR. WILSON: It is apparent that the Doctor has not a very clear idea of the nature of the disease cured, or perhaps he has a faulty memory. It is quite important to know what kind of cataract was cured, especially as there is some doubt about the matter.

DR. EGGERT was then allowed to refer to his paper, which he did, and read parts of it at length.

DR. WILSON: I want to know what kind of cataract it was?

DR. EGGERT: I give you the statement of a specialist who examined the case repeatedly.

S. LILIENTHAL, M.D., New York: In one of the last numbers of Schmidt's *Jahrbücher*, there was an article on diseases of the eye, with special reference to soft cataract, and it was maintained that these are always curable by internal remedies. The writer says that soft cataract is only a symptom, the emanation from a disease. I believe these cataracts may be cured without operation. I am not particularly posted in eye diseases such as my friend Dr. Eggert describes, but we ought to be willing to admit that a homœopathist can do with his medicine what an allopathist admits may be done.

SECTION IV.

REPORT

OF THE

BUREAU OF OBSTETRICS.

J. C. SANDERS, M.D., ... Cleveland, O.
J. F. COOPER, M.D., ... Alleghany, Pa.
MARY J. SAFFORD BLAKE, M.D., ... Boston, Mass.
O. B. GAUSE, M.D., ... Philadelphia, Pa.
F. B. MANDEVILLE, M.D., ... Newark, N. J.
R. LUDLAM, M.D., ... Chicago, Ill.

TO THE

TWENTY-SEVENTH SESSION

OF THE

American Institute of Homœopathy.

VOLUME I. NUMBER 8.

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XLI.

CLINICAL HISTORY OF PUERPERAL FEVER.

By J. F. Cooper, M.D., Alleghany, Pa.

This disease first received the name of puerperal fever from Strother, who published a work on fevers in the year 1716.

Since that time, the descriptions of the various epidemics that have prevailed in the different portions of our own country and Europe may be numbered by hundreds.

The more than twenty thousand pages of printed matter on this subject sufficiently attest its importance.

The class of persons who alone are attacked, its sudden development, the violence and severity of the symptoms, and the usually large mortality, are indications that clearly mark it as a distinct disease. There is sufficient sameness in all its attacks and forms of development to confirm the impression that it must depend upon a specific influence. Upon the precise character of this developing power, professional men entertain a variety of opinions.

One class believe and argue that it is merely the result of an inflammation of organs immediately concerned in parturition.

Another class regard it as analogous to traumatic fever, depending upon septic or pyæmic influences in its severe and most dangerous forms.

A third class hold the opinion that the zymotic influences, capable of developing any of the diseases ranged under the head of fevers, including erysipelas, hospital gangrene, diphtheritic

and septic influences, are capable of developing this disease when brought in contact with women in the puerperal state.

A fourth class regard it as a blood disease, dependent upon the same influences for its development as other zymotic diseases.

These opinions are each held, and vigorously defended, by men of prominence in the profession.

There are still other theories held and defended by individual members of the different schools of medicine, but none of them are of sufficient moment to require a special notice here.

There can be but little doubt in the minds of those who are called upon to treat puerperal fever, particularly when met with as an epidemic, that the generic term fever is properly applied to it. And that it is an essential fever is most strikingly demonstrated by the absence of local causes in the cases that run quickly to a fatal termination.

The name puerperal fever is undoubtedly a most appropriate one, from the fact that the symptoms and condition that characterize it are alone found among puerperal women.

The symptoms observed in the course of this disease, like those observed in other zymotic diseases, are seen to vary greatly in different epidemics, owing no doubt to a greater or less degree of virulence in the morbific influence developing the disease, and the condition and degree of impressibility of those attacked.

Its severity may be influenced by local causes, such as the prevalence of other forms of epidemic disease in a district where it prevails. It is thought that scarlet fever, erysipelas, typhoid, and typhus fevers, are all capable of adding severity and giving cast to this disease. The mortality in the wards of an hospital, where almost all forms of disease are congregated, is frequently seen to be very great. Yet the percentage of loss in many epidemics in the rural districts, with the advantages of fresh air, pure water, and freedom from the noxious gases of a city or hospital, is often found to be as large as that of the apparently less favored district. This is by no means the case in all epidemics, and should not furnish an argument against the use of proper sanitary measures.

When prevailing as an epidemic, many cases set in within the first twenty-four hours after delivery; and in a majority of the

cases the symptoms of its approach are not delayed beyond the third day. It but seldom develops after the fifth, and it is the testimony of experience that a well-marked case is never seen to develop after the eighth day.

Occasionally evidences of its approach are seen during labor, and at times a day or two before labor sets in. Those accustomed to treat this disease will occasionally be able to detect its approach, some hours before it regularly sets in, by the unusually pale and haggard countenance and appearance of suffering of the lying-in patient.

The first symptom in the actual development of a case of this kind, is a chill of greater or less severity, sometimes so slight as scarcely to attract attention; at others very severe, and lasting a quarter to a half-hour, or at times longer.

In cases of puerperal fever the chill seldom recurs a second time.

If frequent chills are felt by the patient, a strong presentiment may be entertained by the practitioner that suppurative phlebitis or a septic influence is being developed.

When the chill is slight, it is merely a feeling of coldness over the back and shoulders, and down the backs of the limbs. When severe, the whole body, including the limbs, becomes cold. In nearly all the cases of this fever, soon after the chill, pain of a rather vague and variable character is felt, generally beginning, or most severe, in the hypogastric region.

This symptom is seldom wanting, even in cases where the secondary lesions peculiar to this disease are found in the thoracic cavity or other parts of the body distant from the seat of pain.

The temperature in most cases of this disease is from three to five or six degrees higher than the normal standard, and it has been known to run to eight or even ten degrees higher than a healthy temperature. The number of respirations is always increased, varying in proportion to the severity of the case, from twenty-four to sixty per minute.

The quickening of respiration is at times observed to commence before the chill, but oftener after it.

The powerfully accelerated action of the heart and frequency of the pulse are constant symptoms of this disease. This ac-

celeration may, like the change in respiration, be at times seen before the chill. During the chill the pulse is generally slender and rapid, but after the chill has passed off it usually becomes fuller, but remains, for the most part, soft and compressible. In the cases that run to a fatal termination, the pulse becomes irregular, rapid, and slender; so much so, in the later stages of such a case, that it is felt under the finger as a mere thread. It varies in the different stages of a case, and in cases of different degrees of severity, from near 100 to 160 beats per minute.

The tongue is usually moist and covered with a whitish coating at the beginning of the attack, and in some cases the tongue is but little altered during the entire course of the disease. In others, after the second or third day, a brownish streak along the centre and at the base of the tongue may be observed.

In that form of the disease apparently modified by typhoid influences, and in cases where the respiration is very rapid, and the patient is compelled to breathe almost entirely through the mouth, the tongue becomes dry and cracked.

The face is generally pale in the commencement of the attack, but after the chill generally becomes red and flushed, until the perspiration sets in, which, in many cases, is very profuse.

Where much pain is felt the face presents an anxious expression, and in the cases where little pain is felt the countenance is usually expressionless and haggard.

The breath and the perspiration in many cases of this fever emit a disagreeably sweetish pus-like odor.

The profuse perspiration, so often met with in this disease, does not sensibly diminish or lessen the frequency or rapidity of the pulse, or the degree of temperature, nor does it always diminish the secretion of urine.

The patient is generally tormented with great thirst while the profuse perspiration lasts.

The lochial discharge is seldom suppressed in the onset of the disease, but it usually diminishes as it develops, and in a few days it may entirely disappear. Occasionally, however, it increases in quantity, and becomes purulent.

Now and then a case will occur in which there seems to be no especial influence manifested over it, either in quality or quan-

tity; and again, in many cases, as the discharge becomes less in quantity, it is very much changed in quality, and is fetid.

Vomiting occurs in many cases, and where peritonitis is a well-marked symptom, is very distressing.

The matter thrown up after the ingesta has been ejected is usually of a dark greenish color, composed mostly of bile. In severe cases hiccough is often seen, and, when persistent, adds greatly to the distress of the patient.

Diarrhœa, mostly commencing about the third day, is a common symptom, and at times it seems to take the place of the vomiting, both being seldom met with in the same patient at the same time. Vomiting and diarrhœa are not constant symptoms of this disease, as cases occur in which neither are seen during the attack.

In its uncomplicated forms the patient is able to lie on either side, or on the back, with the limbs extended, without showing any signs of pain or suffering induced by the position. The walls of the abdomen are usually soft and yielding, with but little distension, except in cases that are very severe and likely to have a fatal termination.

In this class of cases, as vitality recedes, gas accumulates in the intestines, causing the abdomen to be greatly distended and tympanitic.

If the meteorism is very marked, and at the same time the peritoneum is extensively inflamed, very great pain and suffering are manifested by the patient.

The cerebral symptoms vary in different epidemics, and also in the different cases of an epidemic. In a large proportion of cases, during the evening or night, patients will manifest symptoms of mental disturbance, by crying out, or muttering, or talking incoherently, or by attempting to arise from the bed. During the day these symptoms usually remit, except, perhaps, in cases that develop a real puerperal mania. Many cases run their course without any very marked mental disturbance.

In patients who are attacked very soon after labor, and particularly where very violent symptoms are seen, the lactiferous secretion is entirely suppressed. If the attack is later the secretion is very much reduced or in a few days entirely checked. In a

very few cases a trifling secretion is kept up during the entire course of the disease, and in exceptional cases lactation has been restored after convalescence.

PATHOLOGICAL ANATOMY.

Having gone over and noted the characteristics of this disease, some mention is required to be made of the secondary lesions that are found in and which may be said to be incident to it.

The special lesions met with in this disease are those of the abdominal and pelvic organs and tissues, the organs of the chest, and less frequently those of the brain. Of the abdominal organs, the uterus, the peritoneum, the liver, the spleen, and the mucous membrane lining the digestive tube, are, in the order named, the parts that show most strikingly the evidences of structural change.

The structures of the chest most frequently presenting the evidences of organic change are the lungs, the pleura, the pericardium, and the heart itself.

The meninges of the brain exhibit usually what organic changes are to be found within the head, except where a secondary dyscrasia of the blood produces a shrinking or apparent hardening of the substance of the brain.

Fibrinous exudations may be found in any of the cavities lined with serous membrane, and is usually found to be mixed with purulent matter. A state of relaxation, in proportion to the loss of fibrin by exudation, is found to exist in most of the organs of the body. Purulent deposits may be found in the uterine sinuses and in the vascular trunks in various parts of the body.

XLII.

THE ETIOLOGY AND INFECTIOUSNESS OF PUERPERAL FEVER.

By Mary J. Safford Blake, M.D., Boston, Mass.

To give a synopsis of the theories that have been advanced upon the origin of puerperal fever, would be to review the ponderous volumes that have been written upon the subject, from the earliest record of disease to our own time.

The names under which it has been described have kept pace, in number and variety, with the theories. Each master of a theory has had his zealous disciples.

The retention of the lochial discharge, whereby it was believed that the blood became infected with poison, was supported by many, among them Hippocrates, Galen, Sylvius, and Sydenham.

The milk metastatic theory taught that inflammation was produced in any part of the body to which the lacteal fluid was sent. Hufland, Fischer, Boer, and others as well known sustained it.

The liver and stomach, in turn, had conferred upon them the gastric bilious theory.

Next the uterus, the peritoneum, the intestines and mesentery became the morbus loci.

A few years since Meyerhoffer, of Vienna, advanced the idea that the puerperal condition was the result of an undue accumulation of vibriones in the uterus.

Scanzoni, Kiwisch, and others, have placed its origin in a miasmatic contagion, taken by means of respiration into the general system, with local manifestations, more especially in the pelvic organs, because of their bruised and relaxed condition.

In 1847 Semelweis advanced the infectious theory, whereby the

infection is communicated by the physician or attendants, or is developed from the patient herself.

Since that time the opinions of the medical profession among all nations have been crystallizing around two opposed theories.

The one advocates the infectious character of puerperal fever, while their opponents adhere to the so-called specific doctrine, that changes in the blood are the primary factors in the development of the disease, and that these lead to local disturbances.

The infectious theory adherents largely predominate now. Among them are the well-known names of Virchow, Billroth, Waldeyer, and Spiegelberg, of the Germans, and among the English most prominent the name of the late Simpson.

Considering, then, as I do, puerperal fever to be of a septicæmic or pyæmic origin, let us briefly note some of the leading causes that form its development.

There are no doubt morbid ante-parturient agencies that render the patient especially susceptible to their rapid action in the system.

The more frequent occurrence of puerperal fever among primiparæ may, with reason, be traced to the increased liability among them to ruptures of the mucous membrane, and to deeper-seated contusions of the pelvic organs and their surroundings, during protracted and severe labor.

Out of 95 women delivered, Schröder found 89 with erosions of the vaginal mucous membrane, and with cervical and perineal wounds.

Sieven found 80 per cent. of parturient women with erosions and ulceration of the vaginal portion.

Remnants of a placenta upon the uterine wall prepare the uterine glands and bloodvessels for absorption into the system of putrid discharges, which leads to lymphangitis, as the absorption of blood coagulæ does to thrombi and emboli.

There may be present peritonitis; it is a usual accompaniment, and all of the other "itis" in the list may exist at the same time, or each may have a separate representation; which condition existing after death has doubtless led to the great variety of inflammatory theories as a cause of the disease, when it is only as a result that they exist.

There are undeniably some subtle, and as yet unfathomed, conditions resting either with the patient or her surroundings, that favors at certain times and seasons the active development of this death-dealing agent.

We see this as strikingly exemplified in surgical wards and in the virus of vaccine, and in wounds made during dissection. Sometimes a cut is passed by without injury, and again the slightest abrasion may prove fatal.

The contagious character of puerperal fever has been so sadly proven by the majority of obstetricians doing a large practice, that it seems to me as if none such can be found to dispute this phase of its nature.

Not having been as yet so unfortunate as to have had any cases in my own practice, I will refer to an epidemic that occurred in the winter of 1871, in the lying-in wards of Prof. Carl Braun, of Vienna.

A parturient woman was brought into the ward; upon examination, the attending physician found her pulse and respiration rapid, and had her immediately removed to an adjoining room. After a speedy and in no wise severe labor she was delivered, and then removed to a distant and isolated room.

After a few hours unmistakable puerperal fever symptoms began to manifest themselves.

This patient died within thirty hours after delivery, and following her, in the majority of instances as rapidly, every woman delivered that day in the lying-in ward.

For two weeks the terrible scourge went on unabated, and swept off during that time thirty women.

Every precaution was used to stay its ravages by way of ventilation, and in the free use of disinfectants.

Finally, the ward was vacated, fumigated, whitewashed, and repainted, and the temperature of the room was raised, and retained for some time above 80° before admitting patients again.

What was far more effective, in my estimation, than all this, was the refusal to the students to examine any of the parturient women brought into other wards during this time. The majority of them were in daily attendance at the post-mortem examinations of these women; they were also occupied in the sur-

gical and anatomical wards; their hands were, to be sure, thoroughly washed in some disinfectant before making an examination. We all know how difficult, under such circumstances, it is to remove the odor, and no one can positively affirm that contagious germs are not in like manner retained.

One of the chief reasons, in my opinion, why puerperal fever so largely prevails in the winter season, in hospitals, is not because of the increased impurity of the air, but because the students are then present in large numbers in the lying-in wards, and bring to bear upon examinations a large amount of zeal at the time when they are largely occupied in the surgical, anatomical and pathological departments. During the period of this epidemic in Prof. Braun's wards, great care was taken that there be no communication by means of physicians and midwives with Prof. Spaeth's wards, which were removed from the former by an intervening amphitheatre, with two long halls.

This is the school for the instruction of midwives, and is not visited by students, unless by courtesy an occasional foreign one is allowed the privilege. Just at this time there was an isolated case in Prof. Spaeth's wards of psoas abscess. Her sores were never dressed by the assistants without the free use of disinfectants, before examining any other patient, unavailingly, as will be seen.

The epidemic had not fully subsided in Prof. Braun's wards when it began with equal severity in the wards of Prof. Spaeth.

In almost every instance the character of the disease assumed an entirely different form from that in the wards of Prof. Braun; it was of an ulcerous, erysipelatous nature. Speaking after the manner of the enthusiastic pathologist, there were *beautiful* illustrations of lymphangitis, of phlebitis, and of embolic pyæmia. Many of the cases ran a painfully lingering course, and each was in some way characterized by the nature of the supposed source of the epidemic.

I learned from the professors and assistants of each ward, that they were called upon to attend an unusual number of puerperal patients in their private practice; they were unwilling to acknowledge that they had been the agents for conveying it, but it seemed to me then as now, as evident as anything can be that lies without the pale of actual demonstration.

Simpson, Veit, Speigelberg, and a host of others, cite instances in their own practice and observation, in which every patient attended by a physician for a certain period of time were sacrificed, and many instances are on record in which the disease had recurred after the same physician had absented himself for weeks from obstetrical practice, showing that infectious influences may remain with persons indefinitely, as does often the active principle in putrid substances and in fluids.

Puerperal fever, like all other communicable diseases, has been greatly modified in its severity the last decade, owing to improved hygienic conditions—air, light, sunshine, and proper ventilation.

The next ten years will, I doubt not, give still more favorable statistics, since the lesson is being more and more heeded, of not crowding our hospital wards, and of adopting, as far as may be, the isolated cottage system.

The more we strive to remove all pernicious influences surrounding the sick, the more we shall be enabled to conquer the old enemy, death, that has slain its thousands of puerperal victims, and that still counts them by hundreds.

XLIII.

THE DIFFERENTIAL DIAGNOSIS AND PROGNOSIS OF PUERPERAL FEVER.

By R. Ludlam, M.D., Chicago, Ill.

I. DIAGNOSIS.

There is such a diversity in the post-mortem records of puerperal fever that its diagnosis is very difficult. Indeed, until its characteristic lesion has been discovered, we must differentiate it exclusively from its ante-mortem history; just as the typhoid fever was imperfectly recognized prior to the researches of Louis. While its anatomical characters are so varied, they will be very apt to modify the opinions that are held concerning the nature, diagnosis, and treatment of the disease to which they are incident. For, just in proportion as one is satisfied that the puerperal fever is invariably accompanied by this or that change of structure, will his diagnosis thereof turn upon the symptoms which are proper to that particular lesion, whatever it may be. Perhaps half a dozen physicians would decide that a given example of childbed fever was not one of real puerperal fever, because it lacked the very obvious and positive signs either of peritonitis, metritis, cellulitis, phlebitis, septicæmia, or of erysipelas; when in truth, the case might be one of genuine puerperal fever, with one or more of these lesions as a concomitant, or without any of them being present throughout the whole course of the disease.

And thus it is that the evidences of a foregone inflammation, which may vary essentially in different epidemics, and also in individual cases occurring simultaneously in the same neighbor-

hood, have indirectly given rise to a contrariety of views, and a "scandalous confusion" regarding the diagnosis of this fever.

Manifestly, before we can differentiate this disease, we must first know in what it really consists, or at least must determine its chief and most constant symptoms. If it is essentially an inflammation of either of the pelvic viscera, or of their enveloping peritoneum, we should know it, and then proceed to separate this disease from all others. Or if, as certain authors insist, it necessarily involves a group of organs and tissues and vessels, we must be certain of that also. But if these local lesions are merely contingent and secondary upon a distinctive constitutional disease, they should be classed as such, and placed where they belong, and where they will not confuse the mind of the practitioner, or obscure his diagnosis.

Assuming this to be an essential fever, the distinctive anatomical characters of which are but imperfectly known, we must depend upon its clinical history for the means of differentiating it from the diseases which it most nearly resembles, and with which it is most apt to be confounded. If it is a distinct fever, that is liable to be accompanied or followed by certain kinds of local inflammation, we must diagnosticate it, not only from other lesions and their consequences, but also from other idiopathic fevers.

A lying-in woman may have peritonitis, metritis, or cellulitis, without necessarily having the puerperal fever, in which case the febrile action incident thereto is secondary, like that which attends upon pneumonia and pleurisy. Every variety of post-partum inflammation is sure to be accompanied by fever; but there are cases of post-partum fever without local lesions of any kind, or at least in which none have ever been discovered.

It would be very wrong to report a case of pneumonia, with a dash of the typhoid element in it (as we see it so frequently in the West), as one of typhoid fever. And yet cases of puerperal peritonitis, and what is more strange, of diffuse *abdominal* peritonitis, are frequently reported in our societies and journals, as examples of real puerperal fever. It is not at all unusual to diagnosticate a post-partum cellulitis, with its consequent acceleration of the pulse and heat of the skin, as a genuine case of

puerperal fever; while, if the cellulitis and the fever had been consecutive upon a surgical operation about the cervix uteri, instead of upon labor, it would have passed by a very different name, and been treated very differently. It must be true that many such cases have been cured unwittingly, and in the full belief on the part of the practitioner, that the remedies given had overcome and vanquished an essentially specific and malignant fever.

As a means of clearing up the diagnosis of this remarkable disease, I beg leave to submit the following extract from a late work, which gives the most succinct and valuable account thereof of any which I have seen.*

"1. There is a fever which is peculiar to puerperal women, and is therefore appropriately named puerperal fever.

"2. The symptoms of this disease are essential, and are not the consequence of any lesions, and it is as much a distinct disease as typhus fever, typhoid fever, or relapsing fever.

"3. It belongs to the class of zymotic diseases, and results from some unknown blood-changes.

"4. We are as ignorant of the specific cause of these blood-changes, as we are of those which develop relapsing fever, scarlet fever, or any of the other essential fevers.

"5. The determining cause of this fever may be either epidemic influences, contagion, infection, or probably nosocomial malaria.

"6. Any of the local inflammations may occur in the puerperal woman without puerperal fever; and on the other hand, puerperal fever may be so severe as to destroy life, without sufficient local disease to account for the symptoms, or to explain the cause of death.

"7. The specific causes which develop the exanthemata, such as scarlet fever and small-pox, may develop the specific disease with intense malignancy in the puerperal woman; but this does not transform the disease into a puerperal fever.

"8. Septicæmia may be developed in a puerperal woman, either from autogenetic or heterogenetic infection, without puerperal fever, but this infection may also complicate puerperal fever."

The fevers and phlegmasiæ with which puerperal fever is most

* The Puerperal Diseases, by Fordyce Barker, M.D., etc., New York, 1874, page 476.

frequently confounded, are the typhoid, remittent, and gastric fevers, and the milk fever, peritonitis (pelvi and abdominal), metro-peritonitis, uterine phlebitis, pelvic cellulitis, acute desquamative nephritis, acute yellow atrophy of the liver, and after-pains. The diagnosis of this disease

From *typhoid*, or *typho-malarial fever* is not usually very difficult, yet in some cases they may be confounded. In paludal districts especially, women may have typhoid fever during their lying-in. When this happens, however, there is a modification of the usual symptoms of the fever, but even under these circumstances that disease is easy of recognition. It comes insidiously, with less of shock and of collapse than does the genuine puerperal fever. The mucous membrane of the mouth and of the alimentary tract is more or less involved, while the serous membranes escape. The distinctive eruption, the epistaxis, the bronchial cough, and the diarrhœa furnish a fourfold sign which is seldom or never observed in puerperal fever. Either of these symptoms, more especially the diarrhœa and the epistaxis, may be present in puerperal fever; but if we have them all in a given case, there can be no doubt as to the real disease. The season of the year, and the prevalence of typhoid fever in the neighborhood, would also help us to decide between these two affections. The post-mortem lesions of typhoid fever are peculiar, and do not occur in any other disease, while those of puerperal fever are neither characteristic nor constant.

In *remittent fever* occurring in childbed, the ataxic state, the septicæmia and collapse, the persistent exaltation of the temperature, and the intra-pelvic and peritoneal complications of puerperal fever are absent. The organic lesions are located in the liver and spleen, and ultimately, if the case develops into one of typhoid fever or of typhlitis, they will be found either in the small intestines or in the cæcum.

Gastric fever depends upon a subacute gastritis. The seat of the local suffering is circumscribed, and the consequent fever is not very high or long continued. It is usually self-limited, and seldom serious. The lochial secretion is neither suppressed nor altered in quality, and none of the evidences of septic poisoning proper to puerperal fever are present.

The so-called *milk fever*, which is incident to the establishment of the lacteal secretion, and which usually sets in, if at all, about the third day, is often regarded as a real puerperal fever, and I have known the cure of simple cases of this kind to be claimed as cures of childbed fever. As a rule, the chills, the nervous excitement and unrest, the headache and fever which arise from mammary irritation, are not accompanied by a very marked increase in the frequency of the pulse, or of the temperature of the body. If there is a change in these latter respects, it is of temporary duration, and is chiefly attributable to the glandular congestion and the after-pains, and passes off when they have ceased by limitation. In short, the advent of the milk fever at a period when the puerperal fever is most apt to begin, *id est*, three days after delivery, and the existence of after-pains, which simulate metritis, when taken together explain the possibility of magnifying a case of ephemeral fever caused by local irritation, into one of a more grave and serious character, and exceptionally, of mistaking the one for the other.

Puerperal peritonitis of a simple idiopathic kind, usually begins with a sharp local lancinating pain in some portion of the abdomen. In a majority of cases, this pain is referred to one or both of the ovaries, whence it radiates and develops into a diffuse inflammation of the peritoneum. It begins with a chill, which is more or less pronounced. The more rapid and severe the course and character of the attack, the more marked are the inflammatory symptoms, the abdominal tenderness and tympanitis, the retraction of the thighs, and the dyspnœa and delirium. The fever remits. There is no immediate or sudden collapse, and no early evidence of septicæmia. Vomiting is often a troublesome symptom, but the diarrhœa, or lax condition of the bowels which precedes and accompanies most cases of puerperal fever, is not present. Urination may be difficult and painful, but the quantity of urine secreted is nearly normal. The patient cannot lie upon either side.

Pelvi-peritonitis in lying-in women is of generally a traumatic nature, and may or may not be septic in character. Unless the constitution of the patient is very much depraved, and the blood very impure or impoverished, there is no especial tendency to

typhoid complications. The case does not look toward collapse, but toward an extension of the inflammation above the superior strait, with effusion and suppuration within the abdominal as well as into the pelvic cavity.

In genuine puerperal fever there is most frequently a notable absence of the signs of acute peritonitis. Careful examination and manipulation of the abdomen may show that whatever complaint of pain the patient makes, is largely the result of fancy or of fear. Sometimes it is found that while a slight touch with the tips of the fingers causes her to flinch, and to express real suffering, she can, if the attention is diverted for a moment, bear a firm and steady pressure with the outspread hand upon the abdomen. The patient is in a weak and adynamic state. The pulse is frequent, 120 or upwards, and continues so, but it is neither full nor strong. The heat of the skin is often extreme, but later it is bathed at times in a copious, colliquative sweat. In very severe cases the patient sinks into collapse in a few hours, the gravity of the symptoms from the very beginning bearing no evident or necessary relation either to the existence or the severity of the local inflammation. The clinical thermometer shows that the function of calorification is peculiarly and seriously impaired. The temperature is high and remains so, the daily variations being very much deranged, or perhaps reversed, and the high range thereof being but little, if at all, influenced by the perspiration. Despite this symptom, the patient has the frequent rigors or periodical chills of septicæmia. Typhoid symptoms may creep on insidiously, or burst into full view without any premonition.

These symptoms are first in order. As the case progresses, perhaps within a day or two, there may be signs of peritonitis, as an outgrowth or complication of the original disease. The tendency of this fever is from bad to worse, for it is evident that the patient has been poisoned by a specific invisible something, which is not represented in any local lesion of which there is a manifest or satisfactory sign.

From *metro-peritonitis* we would distinguish the puerperal fever by the same general rules which apply to the differentiation of this fever from uncomplicated peritonitis. The simple fact

that the local inflammation is incidental and contingent merely in the one case, while in the other it is the most prominent factor, makes a wide difference between the two diseases. The prodroma, the accompanying constitutional symptoms, the course and tendency of the two affections need not be confounded.

The same applies to *uterine phlebitis*, which, next to peritonitis, most frequently complicates puerperal fever. The autogenetic elements of infection which are found within the uterine cavity after labor, could hardly be absorbed without a risk of phlebitis. If the blood was already very much depraved in character, these diseases might coexist. In some epidemics of puerperal fever they are inseparable. In sporadic cases, however, uterine phlebitis has its proper local signs, and more than all a tendency to develop into crural phlebitis and phlegmasia alba dolens, which results almost never follow in puerperal fever.

Pelvic cellulitis, as a post-partum affection, is either traumatic or erysipelatous in character. In the former case the constitutional symptoms are easily separated from those of puerperal fever. The lack of a frequent pulse, and of a high range of temperature, of the symptoms of shock and collapse, of septic poisoning in the outset, and of the tendency to final abscess and fixation of the womb is sufficiently diagnostic.

In pelvic cellulitis of an erysipelatous character the case is different. Here we have more difficulty in deciding between these two affections. In truth, there is reason to believe, that certain severe epidemics of puerperal fever have depended upon erysipelatous inflammation of the intra-pelvic areolar tissue.

There are cases of *acute desquamative nephritis*, which are incident to the later months of pregnancy, and in which the lesion is not limited by the delivery of the woman. She may have escaped having convulsions and the more marked symptoms of uræmic poisoning, but is nevertheless ill in consequence of the renal lesion. Under these circumstances the symptoms ordinarily ascribed to the retention of urea in the circulation should be sought for. Dropsy of the face, and especially of the eyelids, dropsy of the hands and feet, albuminuria, amaurosis, and peculiar derangements of vision, a violent headache which threatens to induce mania, convulsibility, scanty urination, persistent

lumbar pains, a waxy complexion, an irritable but not very frequent pulse, a slight increase in the temperature of the body, and a slow, low, tedious, intractable course and convalescence, are peculiar to the form of nephritis which supervenes labor. Bearing these symptoms in mind, it need not be confounded with the puerperal fever. Both diseases affect the blood, and in both the nerve centres are poisoned; but in the case of Bright's disease as a post-partum affection, the poison is a specific one, the source and toxical effects of which are always the same. The structural change upon which its production depends is self-limited and characteristic, and therefore its consequences need not, and should not be confounded with the symptoms and the local contingencies of puerperal fever. Exceptionally, however, where the urine is suppressed in the course of puerperal fever, it may happen that uræmia coexists with it.

Puerperal fever may be confounded with *acute yellow atrophy of the liver*. For, although in 33,000 cases of pregnancy, Spaeth found but two examples of the latter disease, it may occur as a contingent of the later months of gestation, or develop during the lying-in. I have seen four well-marked cases of the kind, two in my own private practice, and two others in counsel.

The possibility, both locally and generally, of recognizing the lesion upon which the symptoms depend, and with which they must correspond in nature and degree, is of essential service in differentiating this disease from puerperal fever. The most striking features of this form of atrophy are the jaundiced hue of the skin, which becomes more and more pronounced, the violent headache and delirium, with tremors, convulsions, coma, or collapse; marked fluctuations of the pulse, which is feeble in ratio with its rapidity; great lethargy, depression, and lassitude; pain and tenderness in the region of the stomach, and in the right hypochondrium, with progressive decrease in the size of the liver, and a corresponding increase in the size of the spleen, as proved by physical exploration.

These signs, more especially the "malignant jaundice," the peculiar lethargy and lassitude, and the narrowing and final disappearance of the line of liver-dulness, with the increased extent of dulness over the spleen, are lacking in puerperal fever.

After-pains seldom provoke sufficient constitutional disturbance to cause them to be mistaken for puerperal fever. They are intermitting; worse in the evening and at night; are aggravated by nursing the child and by emotional causes; are a common sequel of anæsthesia during labor; are not attended by a suppression of the milk or the lochia, neither by a persistent frequency of the pulse, or increase of the temperature, and are self-limited, usually disappearing altogether when the lacteal secretion is fully established.

II. PROGNOSIS.

It is a serious, and sometimes a very difficult matter, to forecast the issue of a case of puerperal fever. The disease runs a course which is so varied, and is beset by so many contingencies, that it is sometimes quite impossible to say how it will terminate. There is, indeed, no ailment in which the physician is compelled to give a more guarded prognosis. The qualifying circumstances deserve to be considered separately and carefully. They are:

1. *The Epidemic Variety and Type of the Disease.*—What is true of other essential and contagious fevers is true of this also, that it may be very fatal at one time and curable at another. There are seasons in which it is of a most malignant type, and others in which it is mild and manageable. In occasional epidemics nearly or quite every case will die, no matter how skilful the physician, or how faithful the attention bestowed. It is true that in modern times these terrible visitations are less frequent than formerly, and that the prospect is that in due time they will belong to the history of obstetric medicine only; but under existing circumstances almost any community might be overtaken by such a calamity. In such a case it is quite as requisite that we remember not to promise too much, as it is in a malignant epidemic of scarlatina or of diphtheria.

This precaution applies as well to those cases which are of autogenetic origin as to those which are traceable to a species of inoculation. The "epidemic tendency," as Sydenham styled it, exerts a modifying influence of its own, not only in the production of special lesions, but also in the more or less serious nature of the attack. This disease is apt to be of a grave and dangerous

character in mild, open winter weather; in the spring when the frost is coming out of the ground; when the atmosphere is murky; and when other diseases of a similar character, as variola, scarlatina, rubeola, diphtheria, and erysipelas are prevalent. Its course and danger are also decidedly influenced by a prevalent tendency to typhoid fever and to dysentery, as well as to aphthous affections and to alimentary disorders generally. It would not be prudent to promise to cure this disease without regard to the gravity of other ailments occurring in the same neighborhood, or to the fact that one or more lying-in women had recently died soon after their delivery.

Other things equal, the milder type of puerperal fever is not very dangerous. Many cases recover with little or no treatment, and others no matter what kind of treatment is adopted. In a healthy season, and under circumstances that are conducive to recovery, where there is an absence of all sources of infection from without, and from within also, the patient will generally get well, although the convalescence may be slow and tedious, and troublesome sequelæ may follow.

2. *A Morbid Puerperality induced by Pregnancy.*—The condition of system induced by gestation is often a factor in serious cases of puerperal disease. The drain upon the nutritive and nervous resources of the mother predisposes her to serious complications in any and all of the disorders which are contingent upon her lying-in. In many cases this predisposition constitutes a species of cachexia, which it is almost impossible to antidote and to overcome, and which is the real measure of the gravity of puerperal fever especially.

The fact that this cachexia may not develop or disclose itself until after delivery, or indeed until the case is far advanced, adds to the difficulty of estimating its precise significance. It is a bad, but not always a fatal sign, if puerperal fever sets in, or runs its course along with stomatitis, decided anæmia, anasarca, Bright's disease, varicose veins, or a colliquative diarrhœa, where these are entailed upon the patient as sequelæ of pregnancy. The same is true of the debility which is consequent upon a copious and chronic leucorrhœa that has continued throughout the period of gestation. Such a drain might sap the patient's

strength so effectually as to render her blood a suitable nidus in which the germ of this especial fever may develop itself. These cases sometimes creep on so insidiously, and are of so serious a character, as to demand our closest scrutiny, lest we be tempted to promise to cure them.

I have learned to qualify my prognosis in the case of women with signs of puerperal inflammation or fever, if they were very much reduced and enfeebled before delivery, or if they have been subject to menorrhagia at the month, or to post-partum hemorrhage; and so, also, where they have suffered from milk-leg, or cellulitis, or even from peritonitis after previous confinements. It may happen that mammary abscess, especially of the recurrent variety, depending upon a vitiated condition of the fluids, shall constitute a serious concomitant of puerperal fever. In all post-partum inflammations the suppurative diathesis (the *diathèse de suppuration* of Trousseau), with its tendency to purulent deposits in the larger cavities and in the pelvic areolar tissue, is a grave and dangerous complication which subtracts from the chances of recovery. Exceptionally, however, the occurrence of small abscesses in the breasts and elsewhere may be critical, and signify that convalescence is already established.

All the morbid conditions which are either directly or indirectly consequent upon the development of the fœtus in utero, may be aggravated by suppression and irregularity in the quantity and quality of the milk and the lochia. While these products continue to be free and unchanged in character, the prognosis is generally favorable. If the milk does not make the child sick, it is a good sign. But if its secretion is arrested, and the lochial discharge ceases for any considerable time, the prospect is less favorable. If, along with these symptoms, the pulse becomes very quick and frequent, the respiration rapid and laborious, and the temperature as high as 104°, with derangement in its proper daily variations, the case is a very serious one.

3. *The History of the Labor which preceded the Attack.*— Although neither severe nor easy labors are especially liable to be followed by this fever, yet, in case of an attack, their particular history will sometimes modify the prognosis. If the process of delivery is very much prolonged, it may so exhaust the

patient's strength and vitality as to render her an easy victim to this scourge of the lying-in chamber. Those who bear their first children late in life, and who suffer in a corresponding degree while in labor, recover more slowly and less certainly, as a class, than multipara, and than those who begin to bear children at an earlier age.

The use of the forceps, and of other necessary instruments, as in embryotomy and craniotomy, as well as the resort to version, especially by the feet, multiplies the risks of recovery from childbed fever, if the woman happens to take it during her lying-in.

4. *The Complicating Local Lesions.*—We cannot appreciate the real significance of the several kinds of inflammation which are contingent upon childbed fever, without deciding in each case whether they are idiopathic or secondary. As a rule, where death occurs within a week from delivery, peritonitis, metrophlebitis, or a muco-enteritis will have preceded the invasion of the fever itself. When these and other lesions are secondary, a fatal result is delayed, and convalescence, if it takes place, is very much protracted. So that, if a patient with puerperal fever following the advent of a severe local inflammation, survives the first week, the chances are that she may get well. But if the secondary lesions have first disclosed themselves when the patient's strength was at the lowest ebb, and her ability to resist their invasion was least marked, the prognosis should be very guarded.

If the attack has set in with vomiting and diarrhœa, or if there are severe and chronic complications involving the kidneys, the heart, the lungs, the liver, or the cerebro-spinal system, the danger is also very great.

The possibility of averting these contingencies by a recognition of their incipient signs, and by the use of means which are specific and wonderfully efficacious, without being in the least degree harmful, gives ground for hope and encouragement, even in the most extreme cases. And there is every reason to believe that a more detailed knowledge of its special pathology, prophylaxis, and appropriate treatment, will soon render this disease, with all of its peculiarities and possible complications, as curable as idiopathic peritonitis or pneumonia.

It is a marked feature of the inflammation which accompanies this fever, more especially of its secondary form, that the usual symptoms thereof are very much modified. Even in the marked and decided peritonitis incident to puerperal fever, there may be little or no pain, or complaint of local suffering. Sometimes the worst cases are those in which there is no pain. Nor, in the majority of cases, will there be found anything in the character of the pulse that denotes the access of a severe inflammation. When these signals are not to be relied upon, we turn with the greatest confidence to the *clinical thermometer*, which, more than any and all other means, will help us to decide upon the existence and gravity of the complicating lesions, whatever they may be. Indeed, the employment of this instrument, in the careful prognosis of puerperal fever, is indispensable. It will not enable us to determine what the especial lesion is, but it will afford us an absolute criterion of its advent and of its gravity, as well as of the fact that our remedies are acting favorably or otherwise.

5. *The Coexistence of Septicæmia or Pyæmia.*—Because puerperal fever itself is a zymotic disease, it does not exempt those who have it from the more ordinary causes of blood-poisoning. Indeed, the possibility that this fever and septicæmia, or even pyæmia, may coexist, often leads to their being confounded.

Manifestly, whatever increases the toxæmia, in a given case, will lessen the chances of recovery. A dash of septicæmia, which comes like a fit of intoxication, during an attack of childbed fever, may suddenly run the temperature up to 105° or 106°, and the pulse to 130 or 140, without any apparent reason, and then subside, under appropriate treatment, without having wrought any real mischief. But the doctor must know what it signifies, and the excretory organs must eliminate the extra poison as quickly as possible, or this feather will "break the camel's back."

Septicæmia is, therefore, a much more serious complication of puerperal fever proper than it is of any idiopathic inflammation, whether it be incident to the lying-in or not. It is especially to be dreaded in the case of women with an impoverished and enfeebled condition of system, whose power of resistance and of endurance has been taxed to the utmost by the demands of the

fœtus in utero, and the drain of their strength in labor. According to my own observation, the middle and lower classes of German women are more likely to die of septicæmia superinducing puerperal fever than the same grade of subjects belonging to any other nationality.

In all cases, however, the varying effect of this twofold assault upon the patient's health and welfare will depend upon the amount and quality of the poison which is absorbed, as well as upon her power to resist its toxical influence, more especially in the peculiar circumstances in which she is placed.

When pyæmia is complicated with this fever, the result is generally fatal. Recovery is the exception, and almost never takes place, unless the abscess, or abscesses, are either located externally or find a ready outlet without being emptied into the larger cavities. The coming on of a fetid diarrhœa, with recurrent rigors and sweating, a foul tongue, defervescence, and sudden and decided variations in the temperature of the body, with difficult and irregular breathing and a tormenting cough, are symptoms of a most threatening character. For, as a rule, they will not only signify the death of the patient, but will also serve to humble the physician.

XLIV.

REGIMENAL MANAGEMENT OF PUERPERAL FEVER.

By J. C. Sanders, M.D., Cleveland, O.

Our subject will be better considered under two general divisions.

A. Prophylactic regimenal management.

B. Direct regimenal management.

A. Prophylactic Regimenal Management.

The general propositions of modern medicine that gestation is a normal condition, and that the altered crasis of the blood incident thereto, viz., the diminished fibrin up to about the sixth month and its excess after this date, the diminished density of the serum and diminished number and density of the red corpuscles, the increase of the phosphorized fats and of the water and white corpuscles, all of which are the similitudes of incipient anæmia, and the resultant exaltation and impressibility of all the senses, both of perception and sensation, are not inconsistent with perfect health, are now received and accepted as true. Yet how easy the gradation from these normal to abnormal conditions, from health to disease, in the gestative and parturient and lying-in states, and how slight and oftentimes how subtle and sudden the change.

The rashness and folly common only recently of regarding the fact of gestation as a warrant for the use of the lancet and the purge as proper and necessary preparations for the parturi-

ent process, have very naturally driven professional opinions too far into the opposite extreme of disregard and apathy as to the slighter and subtler expressions of disease possible both to the gestative and parturient states. And women have schooled themselves into an endurance of discomforts and burdens and sufferings, are through their gestations unaided and unrelieved by professional counsel or skill, because, forsooth, she is taught that gestation is a natural state, and parturition a natural process. I would disturb a general faith in the truth of these propositions; yet I unhesitatingly affirm that though they are theoretically physiologically true, they as predominant practical facts are not true! The average woman neither has a natural gestation or a natural labor. Both are burdened with unnatural discomforts, sufferings, and perils.

And while our humanity continues under the bias of our present civilization, I see no escape from the conclusion, that these will ever continue to be true until there is a more general recognition and acceptance on the part of the profession of these truths, viz., that from the time of conception until established convalescence in the lying-in, the average woman is the proper subject of professional surveillance and care! Her food and her drinks, her activities of body and her mental occupations, should be regulated by cultured professional judgment, and her discomforts and sufferings, however slight, whether of body or mind, should be recognized and ameliorated and controlled to the greatest possible extent by cultured skill, and until the halcyon era comes, and it is coming, when on the part of women there is a universal acceptance and adoption of the kinder and gentler regimen and surer and safer therapeutics of homœopathy!

Such a sentiment accepted both by the profession and by women, and such care and attention and ministry of relief and cure adopted as a duty, would save not only an immense amount of suffering in the gestative state, and shorten and ameliorate the inevitable pangs of labor, but would anticipate and thwart most of the malconditions and complications which in labor compromise both the safety of mother and child, and in the lying-in protect largely if not entirely against the attacks of such formidable maladies as the one now under the consideration of this bureau.

With this generalization I will present a few suggestions on the prophylactic regimen of puerperal fever under the following divisions.

1st. All the varied morbid conditions of the gestative period, especially as they spring from the ovaric, uterine, and enteric centres, and all the varied mental distresses, whether they originate in these or from the mind alone, or from all, should receive as they merit an appreciative recognition, and be made the objects of our ministry.

For it is unquestionable that the phlegmosis of the pelvic and abdominal viscera (and which in the majority of all sporadic cases of the fever constitute its essential nature and character), have their inception in some molecular lesion or morbid force, localized or fully intrenched during the gestative history, even if not preceding this.

2d. No dissector of any cadaver or post-mortem examiner, especially no examiner himself, touching or handling the tissues of the dead of this malady; no dresser of suppurative or erysipelatous or malignant sores, should permit himself or herself, or be permitted, to attend a woman in confinement, until a reasonable time has elapsed, and purifications have been instituted by free ablutions of the hands and fingers and wrists in chlorine water, or some other equally potent agent. This rule applies as well to practitioners in whose experience there are occurring frequent cases of the malady, or any one whose fingers and hands touch and handle the excretions of specific or malignant diseases. This rule applies with equal force to all obstetrical instruments. How much soever opinions may clash as to the infectiousness of puerperal fever, no sane man or woman can claim that the lying-in state furnishes any immunity from septic or pyæmic (zymotic) contaminations, from whatever source originating. Then why should not the utero-vaginal surfaces, all aglow with the excitations and impressiveness of the parturient process, and at its completion presenting large tracts of abrasions, and at the site of placental separation a large receiving surface of open bloodvessels, be regarded as especially subject to specific infection, and equally so, surely, with the post-mortem examiner or dissector or dresser of wounds, who is always scrupulously careful to protect by oil

or otherwise the exposed surfaces of his own skin; or who, in case of an antecedent abrasion or cut, abstemiously avoids handling of the knife or sponge or morbid tissues. No careful reader of puerperal fever can be other than appalled at the shameless disregard of these humane and simple prophylactic suggestions.

3d. In case of an epidemic of the malady, lying-in hospitals and lying-in departments of general hospitals should either be broken up and their inmates scattered in private families, or in small improvised cottages or pavilion hospitals, or the most rigorous separation of patients, and cleanliness and purification of wards and rooms, floors and walls and furniture, beds and bedding and clothing, and the speedy burial of the dead be enforced. Indeed, in the face of the appalling mortality in some epidemics of this malady, cremation might find warrant and justification, provided wardrobe, bed and bedding could be included in the funeral pyre.

4th. The parturient and lying-in room should be the airiest and best ventilated room in the house or ward in the hospital. No patient is more in need of oxygen than the parturient and lying-in woman; the former because of her diminished respiratory capacity from the encroachments of the gravid uterus and the otherwise toxic condition of her blood-mass, and because of the efforts and struggles of the parturient process, and the latter because of her resultant and inevitable fatigue and shock. Her room, however, should be airy and well ventilated, without the possibility of dampening or fanning it with moist or cold currents.

5th. A reliable thermometer, so placed as to measure the average temperature of her room or ward, and on a plane with the level of her bed, and maintained day and night, from the beginning of her lying-in until the time of established convalescence, at a temperature of 70° Fahr. No careful student of puerperal fever can fail to notice the remarkable and uniform relation of its occurrence to changes of moisture and temperature, and especially temperature. The almost perfect immunity from this malady in the heated months of summer, justifies this important deduction, in the truth of which I fully believe, that if we make the lying-in chamber summer-like in warmth and dryness, we

may secure an equal immunity from this dread disease in whatever month the lying-in occurs. Such are my convictions on this point, resulting alike from study and observation, that in my obstetric practice I suggest and insist on a thermometer in every case, and would refuse to take the responsibility without a compliance with this suggestion.

6th. In the professional management of labor a few points deserve our attention as prophylactic to this disease.

(*a.*) On the warm perspiring skin of the parturient woman, except on her face and hands, no cold air should be permitted to fall, or cold water to be applied; the face may be fanned at times, and with the hands, may be washed and cooled; this is sometimes inexpressibly soothing and comforting. Cases of extreme hemorrhage may make exceptions to the general proposition. The third stage especially deserves this same care, as well as the period of time immediately succeeding, and which is occupied by reaction and recovery from fatigue and shock.

(*b.*) In the second stage, whatever the character of the labor, the soft parts of the utero-vaginal or perineal tracts should not be permitted to suffer pressure, whether in degree or duration, imperilling either their vitality or integrity of structure. That there is a justified limit to the pressure to which the soft parts may be subjected, both in degree and duration, even in a labor in every other respect natural, is a truth too little heeded.

(*c.*) In case art is necessary to delivery, whether in the first or second stage, the maternal tissues should be scrupulously assured to the greatest possible degree, not only against immoderate pressure, but also against contusion and laceration, whether by the fœtus or by the hand or instrument of the obstetrician.

(*d.*) In the third stage prophylactics have their largest and most important opportunity. They have special reference to the care of the membranes, that as the placenta is taken away from the mouth of the vagina, they are not broken off and left in whole or in part, in great or small sections or shreds either within the uterus or vagina, and specially within the uterus. These membranes are fragile, and on account of their softness and pliancy are readily caught within the grasp of the contracting womb, and rarely by their pressure alone offend the womb or challenge their expulsion,

and yet, by reason of their delicate vitality, readily and quickly disintegrate and decay. I know of nothing short of violence and direct contact of corroding drug, which may so readily and so suddenly set the womb on fire of inflammation, or smite the blood-mass with subtle and destructive contamination, as the débris of these decaying patches and shreds of membrane dissolving in contact with the broken, abraded, and sensitive mucous lining of the viscus. Prophylactics have reference to another important case, that in removing the placenta from the vagina and the membranes from the womb, we have no blood-clot imprisoned within or clinging to the circle of the os or within the vagina. They involve still another case not less important, that in case art becomes necessary to the completion of this stage, all rudeness and violence shall be avoided as unnecessary, and therefore unwarranted. Rudeness and violence have varied expressions in such cases. They appear, 1st, in undue and unwarranted haste; 2d, in violent grasping and clutching and squeezing of the uterus through the abdominal parietes to stimulate or hasten contraction; 3d, in entering the womb by force; 4th, in effecting separation of the placenta by clawing and digging into the substance of the uterine parenchyma, and in holding, in case of hemorrhage, protracted possession of the uterine cavity by the expanded hand or clenched fist.

(*e.*) Whether in the first, second, or third stage of labor, or immediately subsequent, drug doses of ergot should be scrupulously ignored, whether inertia or blood-loss seems to call for its administration. I regard it as the bane of the parturient chamber. I believe, moreover, more children are killed than are saved by its administration. Its specific effect on the uterus after delivery is to constringe and shut it up.

The result is, that what blood within its sinuses is not at once squeezed out, becomes shut down upon and imprisoned within the sinuses, blood which the gentle normal tonic forces were designed to slowly and surely press out of these vessels; and this blood locked thus within the sinuses of the parenchyma must sooner or later disintegrate and come away, and does, after a time, in the form of shreddy, decayed, and offensive lochia, and unavoidably furnishes abundant provocation to septic poison.

7th. The management of the lying-in furnishes occasion also for a few important prophylactic suggestions.

(*a.*) With the exceptional cases of twin labor, or excess of liquor amnii, or inordinate large child, giving rise to great or extraordinary distension of the womb, the bandage, I think, should not be applied. If applied firmly enough to accomplish the end for which it is used, viz., to keep the abdominal walls from flabbiness and pouching, assuming that it can possibly subserve this end, it is full of mischief and risk. This will prove a greater immunity from disturbances of its circulation and innervation and absorbent functions, by not being compressed and pinioned between the promontory and the front walls of the abdomen, or crowded and packed immovably within the inlet, above which it should be free to float unrestrained and at ease.

(*b.*) While the patient's strength is always to be judiciously maintained, however so little or so much her powers may have been taxed and are spent, alcoholic stimulants should, I think, be avoided.

(*c.*) Unless she has suffered marked loss by hemorrhage, or has been greatly exhausted by fatigue, or shock, or both, at her first desire for urination that is indicative of any considerable accumulation of urine, and surely, with or without any conscious desire, by the expiration of twenty-four hours, she is to be aided, duly protected of course, to an upright and sitting posture on a vessel or commode, but is never to be taken out of bed for this purpose. This posture, with proper assistance, is always relieving; but its chief merit is, it permits the escape of clots and shreds of membrane, if any have been retained, and mucus, all easily and quickly decaying, and very surely otherwise to be a long time in escaping, and may be retained if not within the uterus surely within the vagina, and they are an unnecessary dangerous presence always, and especially if there is an epidemic bias towards puerperal maladies.

(*d.*) After-pains should receive more and considerate attention than is generally bestowed on them. I am satisfied that, by the profession and nurses, and even women who are themselves the sufferers, they are too indifferently regarded; indeed, there is a widespread and well-nigh universal sentiment in the lying-in

chamber, that they are a good fault, a conservation, a protection against hemorrhage.

I never could understand the indifference of the profession towards them, for, apart from the misery and broken rest which they entail, I believe it is true that a large number of puerperal fever cases have their origin apparently certainly in unrelieved and uncured after-pains. It is my conviction that when the profession justly apprehends and grapples with and subdues this most common affliction of the lying-in, it will have made important advances in the prophylactics of puerperal fever.

(*e.*) The same remarks apply to the so-called milk fever. As milk fever sometimes inaugurates a genuine puerperal fever, whatever regimen proves prophylactic to the former may also to the latter, and therefore, as prophylactic to both, I regard the care of the breasts and nipples of the highest importance; the former that they may not become over-distended or inflamed by excess of milk accumulation, and the latter that they may become abraded, and ulcerated, and suppurative.

In conclusion of this division of our subject, I have great pains to touch, though briefly, the entire field of prophylactic regimen. I may have been wearisome, but I am sure your impatience at the minutiæ, and criticism on the length of my discussion, will change to interest and satisfaction when more time is allowed for reflection on the main propositions on which the article is predicated, viz.:

1st. The blood of the lying-in woman is already in a state of sharp similitude of anæmia, and therefore intensely receptive, and with greatly reduced powers of recuperation and of resistance to the attack and progress of grave disease.

2d. Her nerve centres are profoundly depressed in energy, yet exalted in sensibility and impressiveness.

3d. The parturient process inevitably involves considerable abrasions of the mucous tissues and exposure of large areas of vascular orifices.

4th. The lying-in state necessarily leaves these surfaces orificial areas, liable to contact, and long contact, with the dissolving and disintegrating débris of blood, membrane, epithelium,

mucus, and pus, all of the unequivocal elements of contamination, septic or pyæmic.

B.—Direct Regimenal Management.

We shall present briefly our suggestions under the following general divisions.

1st. Whatever liberty of bodily movement may have been granted before, after puerperal fever has unmistakably declared itself a perfect quietude, in a horizontal posture, is essential to unqualified success. The position generally and instinctively chosen by the patient is on her back, with body and limbs slightly flexed. Dr. Meigs insists strongly on this point, and is the only author who gives any prominence to the suggestion, whereas it is but the dictate of common sense, saying nothing of the wisdom of careful and studied experience; and this suggestion has special force in cases wherein local phlegmasias of the abdominal and pelvic viscera have ensued.

Dealing with so simple a thing as a severely inflamed hand or foot, simple or septic, we would violate a common instinct if we did not insist on absolute quietude of the member; then why treat an inflamed uterus, or ovary, or peritoneum, or whatever tissue becomes implicated in the progress of the malady, with something of the same prudence and consideration? Not until the violence of the disease is broken and all critical symptoms are passed, especially if a local fire has been lighted, should this golden rule be violated. Therefore, neither for urination, nor bowel movement, nor taking food or drink, nor relief of tedium, should the patient be permitted to be lifted up, or changed from a horizontal position, or carried about her room, from bed to lounge, or bed to bed. To this end the bladder should be kept free from any marked distension, if necessary by stated careful catheterization, and the rectum from impaction, by judiciously used hot enemas, avoiding both teasing or unduly distending the bowel.

The mind of the patient should also be kept free from excitement, agitation, and alarm, and her faith and courage sustained by

a calm, cheerful, truth-assuring demeanor, both on the part of the medical attendant and nurse, or any helper admitted to her room.

2d. Thirst is sometimes a prominent symptom, and nausea and vomiting, sometimes most distressful, an expression of the malady. All drink to appease this thirst, and all food to sustain her strength, may be alike rejected with more or less constant and profound retching.

Here is a nice point. Cold water, a common mercy in our thirst, must here be denied in however minute a quantity, if it sustains or intensifies either the nausea or the retching.

The intolerance of cold water in these extreme cases is astonishing, and must be denied if we expect to master the symptoms. The teaspoonful of the water dilution of our medicine, however high the potency, is oftentimes too much, and will itself sustain the nausea as long as persisted in. In such cases half a teaspoonful, or even less, as five or ten drops, may prove all that can be borne and can be given, however importunate the craving for more. The equivalent but not the excess of this quantity in ice is sometimes to be preferred, as it is sometimes more kindly and gratefully received. In cases with this terrible retching and nausea, ice may be applied directly to the pit of the stomach, or to the spine at a point corresponding, agreeably to the suggestion of Dr. Chapman, of London, who has patented a rubber bag for this purpose.

3d. These truths should never be lost sight of by the obstetrician: 1st. That a woman closes her gestation and labor, and enters her lying-in with a blood status closely similative of anæmia. 2d. That anæmic blood furnishes the most favoring nidus for the lodgment of the specific contamination, and the least possible resistance to the development and progress of the fever, and in case of incidental inflammation, feeds with the most combustible pabulum these greedy fires; and 3d. Food with air is the only renewer of blood. But in cases of so grave irritability of stomach, scarcely any food can be administered, and nutritive enemas cautiously administered may have to be resorted to. Yet sometimes the condition of the bowels will forbid their use. The forbearance of both stomach and bowels must in such cases

measure the amount and quality of food and mode of administration.

4th. The milk secretion is sometimes suppressed and sometimes not. If suppressed, our duty, in my judgment, is limited simply to protection of the breasts from exposure and possible chill, by enveloping them in dry fresh cotton batting. I am opposed to all stimulation or excitation of them, by heat or fermentations or embrocations, with the view to re-establish secretion. If not suppressed, an important question at once springs up, and it is this, shall the child continue nursing? This is a nice point, and deserves careful consideration. My judgment is against continued nursing, for two important reasons: 1st. Nursing by the child greatly stimulates secretion, which she may safely be assumed as having no strength to sustain, for notwithstanding the rallying cry of the heroic school, our duty is to sustain the strength of our patient by every prudent resource, and relieve her from every superfluous or unnecessary demand on her powers. 2d. Nursing greatly excites the ovaries and uterus, equally in disease as in health, and in the same degree intensifies the blood afflux to these viscera, and if they are contingently inflamed, symptoms will inevitably be aggravated. What medical man of careful observation has not witnessed something of the terrible distress which the act of nursing by the child may inflict on the uterus, even under the irritation of nothing graver than an after-pain.

However, if her milk is secreted, and does not spontaneously drain away freely and rapidly enough to keep the breasts from the distress of accumulation, its escape should be quietly and cautiously aided by artificial means, as by pump or mouth of nurse, or young pup, neither of which challenges secretion or distresses her womb or ovary equally with her own child. Whichever is used should be used only to the degree of saving the breasts from the distress of accumulation or risks of inflammation. In such cases I am opposed to all rubbing of the breasts to scatter the milk, as the nurses say, all suppressive application, as mischievous, hurtful, and imperilling.

5th. The lochia is also sometimes suppressed and sometimes maintained. If maintained, it rarely keeps a normal quantity

or quality, and thus rarely is in excess; it is generally scanty, shreddy, disintegrated, acrid, and tainted, sometimes purulent, and variable in color and consistence. Its most distinguishing characteristics are acridity and offensiveness; the former so pungent as to burn and excoriate even the skin with which it may come in contact, and the latter so rank and terrible as to nauseate both nurse and patient every time her bedding is disturbed, and taint the air of a whole house or hospital.

In case the lochia is wholly suppressed, vaginal enemas of hot water, hot as the patient can bear, medicated with the indicated and administered remedy, using great care, of course, as before suggested, that the syringe-pipe and bed-pan, and required cloths are properly clean, and heated before using them, will generally prove not only remedial, but inexpressibly comforting. I wish to be understood on this point. I mean *vaginal* enemas, and yet with their currents so directed as to flood and foment the vaginal end of the uterus, carefully avoiding touching the womb, or engaging the os with the instrument, or carrying the enema into the uterine cavity.

My observation, derived from no limited experience, is that the uterine cavity is intolerant of all foreign bodies, whether solid or fluid. Simply water, so inoffensive a thing as water at a blood temperature, thrown into the uterine cavity in the puerperal state, will more often worry and distress the organ than it will gratify or soothe. I am opposed to all tampering with the uterine cavity in the puerperal state, high authorities to the contrary notwithstanding.

I repeat, vaginal enemas, used in the manner suggested, will generally prove advantageous and comforting. In regard to all such regimenal adjuvants, these ideas are generally inseparable: if comforting they prove advantageous, but if not comforting, and especially if distressful, they prove unconditionally hurtful, and should be abandoned. But with each and all of them, much of all their possible good depends on the manner of their use. They may be repeated once or twice a day, and continued at discretion.

If on the other hand the lochia is not suppressed, and puts on, as it generally does in the type of cases cited, the morbid quali-

ties, especially acridity and offensiveness, very important regimenal indications spring therefrom. The vaginal and vulvar surfaces demand protection from this lochial acridity, and herself and attendants relief from this offensiveness, sometimes shocking. Vaginal enemas of hot water alone, or hot water charged delicately with carbonate of soda, or chlorate of potash, if we are dealing with acridity as the special lochial symptom, or delicately with chloride of lime, if offensiveness is the more prominent symptom, used freely and repeated once or twice a day, yet with the same prudence and caution before suggested, will bestow not only unmeasured comfort and relief, but will greatly subserve curative ends.

6th, and lastly. Not only should the patient's bed-chamber or ward be maintained at a uniform temperature, as before insisted on, but nothing cooler than the average temperature of her body, however heated it may be, with the exception hereafter to be mentioned, whether instrument or urinal, cloths or bedding, or wardrobe, should be permitted to come in contact with the habitually covered portions of her body. Her extremities, feet and limbs, hands and arms, should not be permitted, if artificial heat will prevent, to become or remain cold. The more prevailing special seats of the phlegmasias, which are incidental to the progress of the malady, are the abdominal or pelvic viscera and tissues, and when implicated, demand an intense and often wonderful degree of applied heat. For this use, heat with moisture seems more generally acceptable, and proves more advantageous than dry heat. Hence nothing can exceed the poultice as a stupe for this end. It can be made light and soft, embodies moisture, and covered with oil-silk, retains heat longer than any other cataplasm, and admits a local dermic use of the indicated remedy, and is easily renewed. It may be made of elm bark alone, or with bran, or flaxseed meal and bran; each practitioner and surgeon has a formula he regards the best and thus uniformly uses. This heat may be applied with doubtless advantage to the spine by means of Dr. Chapman's rubber bag, which is admirably adapted for this purpose.

But there may come a limit to beneficial influences of heat applied to the abdomen. I have no doubt it has in many cases

been carried to a mischievous and hurtful persistence of application, although prominently indicated in the progress of the disease, and for a time used with great benefit. The special limit to its advantageous continuance is well defined. It is this: when meteorism becomes a prominent and urgent symptom, whether quite local or general over the abdomen. At this juncture cold should be substituted for hot applications. First cool, then cold, then ice-water, or thin bags of pulverized ice. I wish not to be misunderstood; my conception of the scope of the advantage of ice in such cases is, that it is limited essentially to its power to abate and subdue this terrible and oftentimes the most impending symptom.

But I have no special confidence in its power to control the phlegmasias associated with the tympanitis, and in the absence of this symptom as an urgent fact, however limited its area, I would never make or put in practice the suggestion. But I have unbounded confidence in its power to abate and subdue meteorism. Its use in my hands has been signally and unequivocally satisfactory. The manner of its use is important. The change from heat to cold must be gradual. Cooler and cooler the application until ice-water or ice are substituted. In the meantime the temperature of all the other parts of the body must be scrupulously maintained.

The medical man should take the entire supervision of this important change:

XLV.

THE TREATMENT OF PUERPERAL FEVER.

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It is important, in the treatment of this disease, to have some clearly defined idea of its essential nature, in order to distinguish between the primary affection and lesions which are secondary.

In sifting the literature of puerperal fever, one is met by a variety of opinions so utterly at variance with each other, that the student is confounded instead of enlightened by much reading and research.

This, we apprehend, has arisen from the fact that there has not been any recognized standpoint as to the essential nature of the disease. We shall assume, as it is not within the scope of our essay to prove, its nature, that subject being assigned to another member of the bureau, that there is an essential disease to which puerperal women are peculiarly liable, which is not the consequence of any local lesion, and from its nature is very properly designated puerperal fever.

We propose to briefly define a few of the principal primary and secondary characteristics of this affection, as the basis of what we have to say upon the treatment.

1st. Puerperal fever belongs to what is known as the zymotic class of diseases, and is therefore accompanied by certain profound and destructive blood changes, thus at the very outset of the disease cutting off all reparative supply, and at once prostrating all vital energy. At the same time there is a rapid pro-

duction and accumulation of the original poison, without any adequate means for its elimination from the system.

2d. The physiological function of parturition, differing as it does from every other life function, is accompanied by more or less hemorrhage, and attended by a certain shock not unlike that of capital surgical operations, requiring unusual reparative effort to sustain the system, and therefore, when from any cause this reparative supply is cut off, the system becomes thereby peculiarly liable to yield to morbific or septic influences.

3d. While therefore puerperal fever has its primary seat in the blood, it is manifest that the uterus and other pelvic and abdominal viscera may become the seat of the most intense suffering and gravest organic lesions.

4th. In the treatment of this disease, our remedial measures should be addressed first to the primary seat of the disease, and secondly to the local or secondary manifestations of it.

5th. These remedial measures are of two kinds: first, therapeutic and nutritive; second, local and hygienic.

6th. The guiding symptoms are the pulse, temperature, respiration, tongue, mental states, expression of eyes and face, and subsequently hypogastric and abdominal sufferings, gastric symptoms and condition of bowels and kidneys.

The symptoms which denote the development of secondary or local lesions are by no means uniform, but depend upon the organ or organs affected. It is for the amelioration and control of these symptoms, that we may be required to resort to local and topical measures.

Having thus indicated a few fundamental conditions, we proceed to the consideration of some general principles which should govern the treatment of this disease.

It will be manifest that there cannot be any *specific* for puerperal fever. Every case must be met as an individual, and treated in accordance with the manifestations of the primary affection, and the intensity and extent of the local lesions.

Keeping in mind that childbirth is not the cause but the chief modifier of conditions, we may anticipate in some measure the steps of progress of the malady, and initiate a course of treat-

ment that shall tend to prevent or materially lessen the violence of certain otherwise serious complications of the disease.

In some epidemics, we meet with cases that prove fatal before there has been time for the development of any local lesion; but usually there will arise in the progress of the malady, endometritis, metritis, uterine phlebitis, cellulitis or peritonitis, and thence may come septicæmia or pyæmia, or the patient may die suddenly of thrombosis or embolism.

It becomes us, therefore, to endeavor in every instance to guard against these possible results by anticipatory treatment.

Therefore in the treatment of puerperal fever, and in every case of labor, when this disease is epidemic, more than ordinary care should be used in cleansing the vulva, the vagina, and if it were possible, the cavity of the uterus, of the discharges which rapidly take on a septic character.

The utmost vigilance should be used in inspecting the posterior commissure of the vulva, in order to detect and remove every exudation product from the torn or abraded surface before absorption can take place. The lacerated os is also a point that needs frequent cleansing with tepid water, and Calendula or Arnica; or for offensive discharges, a weak solution of carbolic acid or other antiseptic. This injection should be carefully repeated twice or three times in every twenty-four hours, great care being used not to unnecessarily disturb or annoy the patient. While speaking upon the subject of local cleanliness, I wish to urge the great importance of general cleanliness in the management of this disease. It should be borne in mind that the exhalations from the body and lungs, as well as every other excretion, urine, fæces, and lochia, are charged with the seeds of disease.

Probably no other one feature of the treatment is of more importance, or contributes more to the recovery of the patient than purity and cleanliness.

The greatest possible care should be used in disinfecting the room of the patient; the body and bed-linen should be frequently changed; the surface of the entire body should be frequently sponged off with warm acidulated water, and carefully dried.

In sponging a patient, due caution should be observed not to

expose the whole person at a time, but cleanse a part at a time. The entire body should be gone over twice in every twenty-four hours.

The medicine, drink, and food of the patient should not be permitted to remain in the room when not being used. So important is this part of the treatment, that we deem it physically impossible for one nurse to properly care for a patient sick with puerperal fever.

The nurses should be skilled, conscientious, and vigilant, and should be relieved every ten or twelve hours. There are periods in the disease when a little unskilfulness or injudiciousness will turn the scale against the patient.

Next to cleanliness, as an important factor in the management of this disease, is tranquillity, quiet, serenity.

Herein the conditions are not all within the control of the physician, but so far as they are, we should shield the patient from everything that tends to worry, or fret, or disturb either mind or body. It is better to keep the babe from the room of the mother. No person should remain in the room except while acting as nurse; conversation should not be tolerated in the hearing of the patient; the general conduct of those in attendance should be as quiet when the patient is awake as when sleeping.

The benefits of a wise nurse, in the matter of conduct and conversation in the presence of the patient are incalculable; a word, or look, or hasty movement, may irritate or annoy, so as to precipitate the patient into a fever, or induce a nervous paroxysm that may prove very damaging.

Sleep is an all-important matter, so everything should be done to induce it.

Nutriment.—If the stomach will tolerate food, it should be given in liquid form, in small quantities and frequently repeated. Perhaps there is no other disease in which a stimulating beverage is more beneficial. It seems that whisky, brandy, wine, or wine-whey, has the power of sustaining the vital forces against the depressing influence of the blood poison. Alcoholic stimulation can be pushed to a great extent with positive benefit. I have used with marked benefit, in cases of excessive stomachic

sensitiveness, the expressed juice of raw beef mixed with sherry wine.

I have seen this retained in the stomach when every other form of nourishment was rejected.

The vital forces need sustenance from the beginning, therefore too much circumspection cannot be used in the matter of diet; and during convalescence, which is apt to be tedious, the food should be varied and of concentrated form, so that the greatest amount of actual nourishment may be obtained from the least bulk, and of a consistency requiring the least outlay of vitality in the process of digestion.

Occasionally a few grains of pepsin will aid the work of digestion, especially if milk form a considerable portion of the food.

Puerperal fever is ushered in with a chill, generally before the third day after delivery; the chill is followed by acceleration of the pulse, increase of temperature, and hurried respiration. These initial symptoms, which follow the chill, persist with more or less uniformity throughout the progress of the malady. The pulse runs up to 120 and 130, and not unfrequently as high as 160 beats per minute; temperature from 101° to 106°; respiration from 24 to 36 and 40, and often higher.

When we reflect that we are dealing with an æsthetic condition, we can understand that such a state of things cannot be maintained without speedy destruction.

Two thoughts suggest themselves: We must control the frightful rate of the heart's action, and sustain the vital forces that are being rapidly exhausted by the two causes,—morbid poison and excessive action.

This is clearly very different from that exaltation of life forces which we ordinarily term fever, and which possesses the elements of self-limitation. A few doses of Aconitum and a glass or two of cold water brings sleep, and the situation is mastered.

If we can promote the elimination of the blood poison, or stop its accumulation, we shall by that means reduce this excitation. The means to this end are twofold,—therapeutic and sustaining —medicines and nutriment. If we rely upon medicine alone, our chances of success are only partial. We must unite with our

medicines careful and judicious alimentation. Alcohol, if not the chief, is, in our estimation, an indispensable element of diet at this stage of the disease. I believe it is usual to wait until the patient appears to be sinking before administering stimulants, and then the benefits are so meagre as to be inappreciable, and hence they are pronounced useless. The reason is, that they are regarded as a *dernier ressort*, instead of giving them in their proper time—*which is, when there is yet a vitality to act upon.* The time to get good results from stimulating nutrition is, at the very beginning of the disease.

Veratrum vir. will perhaps more nearly cover the conditions of the first twelve or twenty-four hours than any other remedy. Apis, Crotalus, Ars., Carb. veg., Carb. an., Amo. carb., Carbolic ac., Rhus, Terebinth, and Mur. ac., are some remedies which possess curative and modifying influences over the disease throughout its entire course. They give tone and character to the vital forces, and at the same time promote the elimination of the poison.

While steadily keeping in mind these fundamental and primary conditions, let us look at what is taking place *pari passu* with the foregoing, in the reproductive organs. Here we shall find, extending over a greater or less part of the abdomen, tenderness, tympanitis, and distension. These conditions are not uniform; they indicate the principal seat of the local lesions, pointing to the uterus or peritoneum, as the case may be.

I wish to call especial attention to one of the remedies already enumerated, as it seems to possess the peculiar power of modifying, in a most manifest degree, the tenderness and distension of the abdomen. If I had not witnessed its benign influence, I should hesitate about recommending it in this place. I should feel condemned if I allowed any fancied adherence to a dogma to prevent my using that which experience has taught me to be beneficial in a malady so fearful as puerperal fever.

My own conviction is that we have not yet fully comprehended the extent of our law of cure, neither have we yet discovered all the methods by which it may be made available to the sick. I do know that I have witnessed results little less than marvellous by the topical and external use of Turpentine, in connection with its internal administration.

An important matter to observe is the condition of the bladder. If there is any considerable difficulty in passing water, it should be emptied, with great regard to gentleness, by the use of the catheter.

If the milk is not secreted, owing to the early invasion of the disease, no effort should be made to establish it, at least until the patient is convalescent.

If it has been secreted, and continues to flow into the breasts, it should be drawn off by art, as it will not be fit for the use of the babe.

No one can properly supervise a case of puerperal fever without a careful inspection of it at least four times in twenty-four hours, noting the pulse, respiration, temperature, condition of brain, stomach, abdominal and pelvic viscera.

While carefully guarding the main citadel, we must also be on the alert lest the foe appear in full force at some unguarded point, and take us by surprise.

There are many important points in the treatment of this dire malady, that cannot be touched upon in an essay which is expected to be brief. I have endeavored to make mention only of some of the leading steps in the treatment.

APPENDIX.

DISCUSSIONS.

[Second Day—Morning Session.]

JAMES T. ALLEY, M.D., St. Paul, Minn.: I would ask whether the gentlemen have ever seen a case of true puerperal fever without tenderness of the abdomen on pressure? I am quite sure that I have witnessed such cases.

R. LUDLAM, M.D., Chicago: I am free to say that I think there can be no doubt at all that true puerperal fever may exist and run its course without local pain; and I have come to look upon such cases as the most serious that can occur.

S. S. LUNGREN, M.D., Toledo, Ohio: I will relate a case of puerperal fever in which there are, as I think, some points of interest. It is the only case of the disease I was ever so unfortunate as to lose. The lady, when she was certain of her pregnancy, immediately began to dispose of her personal property, as she said she would not live. Time passed on, and she came to within two weeks of her lying-in period, when she sent for me to attend her, as she expected immediate accouchement. I told her I thought she had two weeks yet before her confinement, but she said, gently and calmly, that she had but two weeks to live. She was just as positive she was going to die as she could be. I had often heard women speak thus of their expected confinements, and made little account of it at the time. At the proper time she was taken in labor, was delivered easily, after about two and a half hours' labor, and everything seemed to go on well. On the third day, scarcely more than forty-eight hours after her delivery, she was taken with a chill, not very severe, however, and there was neither pain nor tenderness of the abdomen on pressure. Fever set in and ran very high. She said that this would be the cause of her death; but I tried to rally her and to dissipate her fears, yet without success, as she persisted in saying that she would die, and that I could do nothing to help her. On the next day there was slight tenderness on pressure, and some meteorism of the abdomen. On the fifth day she had copious discharges of a dark-colored liquid. She was suddenly seized with vomiting, ejecting large quantities of black coffee-grounds-looking liquid, and immediately after sank gradually and died, with-

out any apparent effort to rally on the part of the system from the very first. She retained her senses almost to the last moment, was always pleased to see me, but persisted in asserting that she would die, and that nothing I could do for her would be of any avail.

O. B. GAUSE, M.D., Philadelphia: It seems to me, sir, that this is a subject that should receive our closest attention. Every physician, whether he is willing or not, has to be an obstetrician, and take the responsibilities belonging to attendance on such cases.

WILLIAM A. EDMONDS, M.D., Memphis, Tenn.: I have been in general practice for some twenty-six or twenty-seven years, and have naturally attended in that time a large number of labor cases, but I do not believe that I have had more than five or six cases of puerperal fever to attend; of these I lost none. I would inquire of Drs. Ludlam and Gause as to the percentage of cases of this disease.

CONRAD WESSELHŒFT, M.D., Boston, Mass.: I feel a deep interest in the subject, and have listened attentively to the papers read. It seems to me that when a subject of this kind is brought before us in a series of papers, the therapeutical portions should be read at length, and a synopsis only given of the other portions of the subject. Now, so far as the treatment of puerperal fever is concerned, I believe there has been but little or nothing said about its homœopathic treatment, and a great deal about local applications. It seems to me that they are stated as cases not amenable to strict homœopathic treatment, and as if no means can be found for their cure inside of homœopathic practice, and whatever is done for them is to be done by applications, by palliatives, and other non-homœopathic means. I do not object to external applications, turpentine, poultices, and things of that sort, *per se*, but I should like to have some show for homœopathy, and confess that I would feel much better satisfied and considerably more edified by listening to a recounting of cases cured by homœopathic medication, and the indications given for the remedies used. I do not object to the use of adjuvants, but I do object to having homœopathy made subordinate to their use, when I am quite sure they are and should be subordinate to homœopathy. I wish, however, to make some remarks more particularly in regard to *diet* during fevers of this kind. In treating a case of this kind of disease, no question can be of greater importance than the question as to how we shall nourish our patient. I believe the tendency is to stimulate, which means, I have no doubt, the use of alcoholic liquors of some kind. Now this is a practice resorted to very largely, I might say enormously, by our brethren of the old school; but the results of their treatment of puerperal

fever is not sufficiently encouraging to induce me to follow their plan. I am not opposed to the use of alcohol from any total-abstinence notions, but simply as a medical man opposed to the use of an agent which I believe to be seldom beneficial, and very frequently injurious. I know what effect alcohol has on a person in good health, and I know that it does not make him feel either stronger or better. I cannot believe that it can have a different effect upon a sick person. I have not used it in my own practice, but I have often watched its effects in the practice of others, and I am not pleased with them. In these cases, in typhoid fever, and diseases of that nature, where alcohol is used, my observations have convinced me that its use, instead of leading to an abatement of the fever and a general improvement, has been attended with the reverse effect. And in these cases there is one point which is of the greatest importance, and that is, for us to maintain, with the greatest care, the patient's digestive capacity, which is greatly impaired, not doing anything that will in any way destroy the limited ability of the stomach to digest nutriment. Now alcohol does injure the stomach in this way, does spoil the digestive capacity of the patient, and does not give anything to compensate for this loss.

As homœopaths, we should be proud of the fact that Hahnemann was the great reformer in the matter of diet for the sick, and especially for those sick with fever. There are no rules for diet and regimen superior to those laid down by Hahnemann. It is a pity that homœopaths are becoming less strict on these points than they used to be. There is a rule in connection with the diet of a patient affected with puerperal fever, or any other disease of that febrile character, which is a good one. It is, that the best article of food for the patient is that one which she is most capable of digesting. It is better to have her take a spoonful of food which she can digest than half a pound or pint of material which she cannot digest, and which affords no nourishment. I have heard raw beef and sherry recommended, but I do not think much of that recommendation. Raw beef alone has been very highly recommended, but I am not clear in my mind as to whether it is as digestible and nutritious as is claimed. I have seen it eaten with avidity and relish, and it may be an excellent article.

GEORGE W. SWAZEY, M.D., Springfield, Mass.: I am much interested in these papers and this discussion, and I cannot help thinking how our fortunes vary. We listen to the papers of these learned professors, and we come to the conclusion that puerperal fever is not only a very serious but also a very common disease. My friend from Tennessee (Dr. Edmonds) asked a very pertinent

question awhile ago, as to the percentage of these cases to obstetrical cases, but this question has not been answered.

DR. GAUSE: It will be answered in good time.

DR. SWAZEY: I have it in my mind to make a partial answer to the question myself, so far as my own personal experience goes. The percentage of such cases of puerperal fever as I have heard described, in my own practice, has been just nothing at all. I have been in practice nearly forty years, and I am not able to recall even a single case of this nature; and yet, during almost the entire term of forty years, I have been in full and active practice, including obstetrics.

Dr. Gause admonishes us to be careful in the lying-in chamber. A look or a word, he says, may be disastrous. Now, this is all very true, and we should be very guarded. The effect of looks and words from the doctor to the nurse, is sometimes very powerful in their action upon the patient; and not only may she be injured by looks and words, but she may also be benefited by looks and words of a cheering and inspiring nature. In regard to the use of alcohol in these cases, I agree fully with my colleague, Dr. Wesselhœft, in so far as my experience goes. It seems to me to do much more harm than good.

DR. O. B. GAUSE: Puerperal fever is a disease *per se*. Its percentage varies greatly, so that one man may see a large number of cases, and it is no discredit to him to have them, and another man may practice forty or fifty years and never see a case in all that time, and yet it is not necessarily any credit to him that such is the case.

T. F. ALLEN, M.D., New York: I am greatly astonished to hear learned pathologists, who prescribe according to the pathological condition of the parts or tissues affected, recommend such medicines as Aconite and Veratrum viride for puerperal fever. Can it be possible that such medicines can be of any service in this disease? According to the pathological and tissue lights, they cannot be of any more service in such cases than can moonshine. But I hear some one say, they are indicated by the symptoms. Yes, so they are; and the symptomatologists, of which class I am happy to say I am one, have found that out, and recommend them very highly; but if the pathologists and tissue men are correct, they cannot be of use in this disease; and if they were true to their doctrines, they would not use them in such cases. In regard to the matter of diet, my preference is for milk, in such cases. The patients usually take it with a relish; it is nutritious, and easily digested, and I have found nothing so generally serviceable.

S. LILIENTHAL, M.D., New York: When I hear gentlemen

tell about having been in practice for twenty or forty years, without ever having lost a case of puerperal fever, or of malignant scarlatina and diseases of that nature, I do not doubt their words in the least, but I simply say that it is because they have not had such cases. In the beginning of my practice it was my misfortune to pass through two very severe epidemics of puerperal fever, in which all physicians, allopathic and homœopathic, lost a great many cases, among both rich and poor. So powerful were the effects of the poison that the patients seemed to be very soon beyond reach, and the doctor could do nothing. If called early in some cases, there was a chance to save life. As to any percentage being given, that is impossible. You may practice twenty or forty years without seeing a case, and you may find yourself in the midst of an epidemic in which nearly every parturient woman will be in imminent danger from the disease.

In regard to the treatment, I do not intend to find fault with any man's treatment, or to turn a deaf ear to his recommendations. While I am somewhat of the opinion of those who have spoken against alcohol, and do not use it much, I would not hesitate to do so if I thought it would benefit my patient. I agree with Dr. Allen in regard to the milk diet. I am sure there are cases in which the treatment recommended by Dr. Gause would be the best for the patient. Let us do the best we can for our patients, and not brag when we are successful.

DR. W. H. EDMONDS: Dr. Lilienthal may have understood me to say that I had never lost a case and had never seen a case. What I did say was, that in an experience running over a considerable number of years, I had not seen more than five or six cases, and of these I lost none.

DR. R. LUDLAM: My answer to Dr. Edmonds's question and to Dr. Swazey's remark is, that their experience has been exceptional, and that it has happened, fortunately for them and their parishes, that an epidemic of puerperal fever has not dropped down where they were at work. That they have had no sporadic cases to treat is due, I think, to the fact that they are too wise and sensible to use the purgative and the opiate after parturition. A cathartic on the third day was a rule with physicians of the old school, and I have no doubt it gave rise to very many bad cases. The old school doctors themselves have begun to see it in that light now, and are abandoning it, with great advantage to their patients and themselves. And those gentlemen who have not seen cases of puerperal fever have missed them because they have not used the good old cathartic or the opiate. They have not been privileged to treat those cases because of this, and because no epidemic has come sweeping through their district, car-

rying death with it into so many houses and homes. I do not allow the use of cathartics or opiates, and I do not allow my lying-in patients to receive and entertain visitors within two weeks after confinement. By this latter course they escape the perils of gossiping visitors, who may say or do something that will prove very injurious. The mind has a wonderfully powerful influence upon the body, at such times especially. I think the case related by Dr. Lungren points in that direction. The condition of the woman's mind, impressed with the idea that she must die, so operated upon her physical organism as to bring about the train of physical phenomena which led to her death. I have a rule in regard to obstetric practice, and that is, that I will not agree to attend a case of labor unless I can treat the patient during her pregnancy. I believe that, in consequence of this preparatory treatment, my patients escape many ills that might otherwise befall them. In regard to diet, I agree with Dr. Allen in his remarks on milk, and if I were to pass through another epidemic of puerperal fever, believe I should resort to it very extensively. As regards medical treatment, I certainly think that as symptoms arise they should be met by properly selected homœopathic remedies. I have the greatest amount of faith in medicines being able to shorten, lessen, and modify, and even prevent, disease; and I have as much faith in the good action of medicines in this disease as in any other. And Dr. Gause, in his paper, has acknowledged the value of such medication, and pointed out what medicines are likely to be of use.

Dr. Ludlam then gave notice that there would be a session of the Bureau of Obstetrics at four o'clock in the afternoon, and invited all members interested to attend.

SPECIAL SESSION OF THE BUREAU.

(A special session of the bureau was held in accordance with the above announcement, Dr. D. E. Holt presiding. A number of members attended the session in addition to the members of the bureau.)

Dr. J. C. Sanders read his paper on the *Regimenal Management of Puerperal Fever*.

Dr. Ludlam: I would like to hear from Dr. Woodbury.

J. H. Woodbury, M.D., Boston, Mass.: I have been very deeply interested in the papers that have been presented by this bureau, and I must accord them high praise. I cannot but regret, however, that some of the subjects have not been so fully treated of as others have, nor as I would like to have them; for

instance, that important question involving the contagiousness or infectiousness of the disease.

DR. SANDERS: That point is discussed in one of the papers, that of Dr. Mary J. S. Blake.

DR. WOODBURY: I will say a word on that subject, hoping that it will lead to other remarks. It has been my good fortune to have had very few severe cases of puerperal fever to treat in connection with my earlier practice. About the middle of last May I was called to a case of puerperal fever in consultation with a colleague. The visit was brief, the case was not severe, and it seemed to be progressing satisfactorily. This occurred on a Friday morning, and on the following morning (Saturday) I was called to attend a case of labor a short distance from the city. On my arrival I found that the child was born, the after-birth delivered, and the woman put quite comfortably to bed. My visit was brief, and I did not in any way touch the patient, and I had no occasion to do so. On Sunday she was doing very well. On Monday well-marked symptoms of puerperal fever developed themselves; these increased in intensity with great rapidity, and on Thursday she died. The physician who had called me in consultation to his case, had an experience similar to my own. He was called to a case of labor on the Saturday, and in a few days his patient died of puerperal fever. Now the question in my mind is, whether these results were merely co-incidences, or whether these last-mentioned women were infected by their physicians having attended the first case. I should like to hear the opinions and experience of the members on this point.

LEWIS H. WILLARD, M.D., Alleghany, Pa.: I did not intend to speak on this subject, but it is one in which we all have an interest in my section of country. Last winter a year we had an epidemic of puerperal fever at Sharpsburg, six miles from Alleghany City, and in three months or less sixty cases were reported, of which forty terminated fatally, most of the patients dying within three days of their seizure. The symptoms in these cases were about as follows: The women went on for two or three days after delivery very nicely, when alarming symptoms would suddenly set in; the patient became dull and stupid; the tongue became dry; vomiting and excessive diarrhœa would occur, with very severe pains in the abdomen; then the patient would gradually pass into a condition of insensibility, which almost always terminated in death. There was little or no tympanitis, and over and along the track of the spine petechial spots made their appearance. The paper of Dr. J. F. Cooper, presented to-day, treats of this subject. I have a knowledge of a

large majority of these cases. The physicians told me the symptoms, and they were similar in nearly every case. Those that lingered longer than two or three days became tympanitic; there was some drawing backward of the head, and some tenderness along the spine. In one case, occurring in my own practice, death ensued within fifteen hours from the time of seizure. In another case, with somewhat similar symptoms, I gave Opium 3d, and the patient recovered. In another case, which came into my hands from those of an allopath, I again noticed the peculiarity of an absence of tympanitis, and the presence of tenderness along the spine. We had three cases in our hospital, of which two recovered, and the other died. The medicines used in these hospital cases were: Veratrum, Arsenicum, Opium, and Rhus. Veratrum seemed to be a valuable remedy in low cases, and in some of them seemed to be of avail even when the life was apparently going out.

DR. LILIENTHAL: Which Veratrum?

DR. WILLARD: Veratrum album. It was given in cases where the prostration was very marked, and there was profuse, cold, clammy sweat upon the forehead, with cold extremities, and a pulse of 130. Veratrum 6th was given to two cases in this condition, and they both recovered. Arsenicum had seemed to do no good. Rhus was given where the patients were continually tossing about the bed, and seemed as if not able to keep still; tongue dry and cold, and much mental distress and inability to sleep. Opium was used where there was marked stupor and insensibility.

H. N. MARTIN, M.D., of Philadelphia, asked Dr. Willard whether Stramonium had been used in any of the cases.

DR. WILLARD: It might have been given, but I do not know that it was. This disease, in many of its symptoms and conditions, bore a striking resemblance to cerebro-spinal meningitis.

DR. LILIENTHAL: Was there any cerebro-spinal meningitis in the town at that time?

DR. WILLARD: Yes, sir. It was quite prevalent in that neighborhood at that time, and since then a great many persons have been affected with soreness at the back part of the head, and particularly in and around the mastoid portion of the temporal bone. These cases have been relieved by Gelseminum and Rhus.

G. W. SWAZEY, M.D., Springfield, Mass.: Did you have any cases of a similar character occurring in children?

DR. WILLARD: Yes, sir. We had quite a number of cases of cerebro-spinal meningitis occurring in children. I myself attended quite a number of such cases last fall.

A. S. BALL, M.D., New York: I would ask if alcohol or spirits were used in these cases?

DR. WILLARD: In the cases of cerebro-spinal meningitis we had to resort to stimulants.

DR. BALL: Why?

DR. WILLARD: Because so many of them lingered on so long. There was danger of them dying of inanition and starvation, and we had to give them stimulants to stir them up and keep them up. We gave them milk punch. We gave them milk punch while the tongue was dry and parched, and when it showed signs of moisture we gave them beef tea. If the stomach would retain nothing, we gave beef tea per rectum, and in that way supported life.

LYMAN CLARY, M.D., Syracuse, N. Y.: I think I can state a few points in reference to this interesting matter. I remember a terrible epidemic of puerperal fever that occurred in 1836. An old Irish midwife lost eighteen cases in less than four weeks. I will relate one of my cases to show you how rapidly fatal the disease was. A lady was confined with her second child; I was called at seven o'clock in the morning, and by nine o'clock the child was born, the placenta was delivered, and she expressed herself as being very comfortable. I left some mild prescription, and went my way (I was called an allopath in those days), and I would not have visited her again that day but that I was in the immediate neighborhood. The next morning I was out early, having an operation to perform, and I saw the husband and his father, who was a physician of Troy, N. Y., standing in the doorway. To my query as to how the woman was, the answer was, "She is very comfortable." I went in and went direct to her room, and if I had been struck and knocked down, I could not have been more thoroughly shocked than I was by her appearance. I saw death written on her face; her pulse was very feeble, and so rapid that it was almost impossible to count it, and the abdomen was as much swollen as it could be, and so tender to touch that she begged me not to hurt her on my placing my hand lightly on it. Now you will please remember that it was scarcely twenty-four hours since her confinement, and during the first eighteen hours at least, she had certainly shown no signs of disease, and had been, as she said, "very comfortable." My partner and I used leeches and fomentations, but she died at two o'clock in the afternoon. I had several other cases which terminated very much in the same way; and I believe the other physicians of the place had an experience very similar. The old midwife had a large practice among the lower classes, and she lost a great many cases. I have no doubt but that she carried it

from patient to patient, and I suppose we doctors did the same. I have read of an English physician who had a large number of these cases occurring in his practice, and who, in consequence, gave up obstetrical business, and went away for some time, and his successor had no cases at all. On his return, supposing himself to be then free from all injurious influences, he again went into practice, and the first woman he attended in labor had puerperal fever and died from it. I will relate another occurrence that came under my own observation. Two young physicians procured a subject, and they made dissections with me in the office during the winter. As the weather became warmer I desisted, but one of these young men kept on at work until June. I went West, was gone about ten days, and on my return this young physician told me he had a bad case of what he believed was puerperal fever, in a woman who lived on the towpath; that he wanted me to visit her with him, and that his own wife, who had been confined and attended by him, was also sick, and he was much distressed about her. I went with him to see the woman at the canal first, and verified his diagnosis. I at the same time told him that the patient would die, which she did the next day. I was reluctantly compelled to pronounce an almost hopeless opinion of his wife's case, and she died, although she was a very healthy woman, and had had an easy labor. I was so unfortunate as to say to him, "Doctor, is it not possible that you have communicated this disease from the dissecting-room?" The poor young fellow never got over it. He went South, to Raleigh, and died there a maniac. These points may serve to throw some light on the question of the infectiousness of this disease. I myself believe it is carried from case to case, generally by the physician or the nurse. But I have a very different feeling now on being called to a case of this kind, from what I had when an allopath. Then I went with fear and trembling, hoping for the best, but anticipating the worst; but now, since I have been practicing homœopathically, I go with the assurance that the remedies I give will suffice to carry my patient safely through her perils. And I wish to say also, that from observations I have long been making, I am convinced that not three out of every five cases reported by allopaths and homœopaths as puerperal fever are puerperal fever at all. It seems to me that the cases reported by the gentleman from Pennsylvania (Dr. Willard) were cases of cerebro-spinal meningitis, and not truly and properly puerperal fever. And while I am willing to and do acknowledge the great efficacy of homœopathic medicine in the treatment of true puerperal fever, yet when I hear reports of cases of puerperal fever that were "cut short" by this or that

medicine, I feel satisfied in my own mind that there has been an error of diagnosis.

DR. WILLARD: When the epidemic at Sharpsburg broke out, one of the allopathic physicians there had all the cases at first, and he lost five or six women in rapid succession; then another doctor had some cases and some deaths; and, finally, all the physicians—some seven or eight—had numerous cases and numerous deaths. But if these cases were cases of cerebro-spinal meningitis, the doctors were all mistaken, and there were no cases of that disease occurred in any other class than the lying-in women.

T. L. BROWN, M.D., Binghamton, N. Y.: I have observed, during twenty years' practice, that the genuine homœopathic physicians—those who practice pure homœopathy and do not mix it up with other methods—have very few cases of puerperal fever to treat; while the allopaths and mongrels have a great many. One physician in particular, who used to be a heroic practitioner of the old school, lost in one year twelve cases by puerperal fever, and in another year seven cases, and there were no other cases at all in the hands of the other physicians. These cases all had tympanitic abdomen and great tenderness, the secretions were suppressed, and they died in a stupor. I found out that he gave heavy doses of chloroform during labor, and morphine to relieve the pains, and a cathartic on the third day. He abandoned all these things, and now he has no cases at all. I believe that all his cases grew out of his practice. I have had but three or four cases during a twenty years' practice.

I wish now to say a few words about Alcohol and its so-called remedial and nutritious properties. I question both its remedial and its nutritive properties, and I feel satisfied that it does a great deal of harm when given to the sick, and am almost equally certain that it does no good in any case in which it is administered. We are told that it arrests the destruction of tissue; but it seems to me that that is not just what we want to have done. On the contrary, we want to have nutrition and repair go on without interference. Some one mixes it with milk. He spoils the milk, which is good for the patient, by adding to it the alcohol, which is bad. And if the patient should be benefited by the milk even when it is so spoiled, the doctor is apt to say to himself, that if he had not given the alcohol to his patient she would have died. We do not look at this question of alcohol fairly and squarely. We are governed too much by the practice and doctrine of others, and we go on and use it without stopping to seriously inquire whether it is helpful or hurtful. As for me, I have made up my mind that alcohol is not good for the sick or

the well, either as food or as medicine; and I am very glad to see that its use is being abandoned in the European hospitals, where the men think for themselves.

S. R. BECKWITH, M.D., Cincinnati: I have been much pleased with this discussion. When I left college, I was full of the belief that I could cure every case of disease, and the gentlemen who spoke last might relate cases of cerebro-spinal meningitis they had cured with this, that, or the other medicine, in high or low potencies; but I have heard very little about the cases not cured. I am specially pleased with the paper of my friend, Dr. Sanders. The points are well taken, and the whole paper is very well written, and I agree with its views in general; but at the same time I differ with the Doctor on some points, as he and I are apt to differ. Dr. Sanders does not use the bandage after labor, and yet his patients do not drop to pieces nor die. I *do* use it, and my patients do not die. Again, the Doctor does not use warm applications when the secretions are suppressed.

DR. SANDERS: I do. I unhesitatingly use vaginal injections of hot water.

DR. BECKWITH: We sometimes find that the stomach rejects everything, even a sip of cold water. Now what are you to do in such cases but resort to something that will stimulate the stomach and strengthen its tone. And my experience has taught me that there is nothing will do this so surely as a dose of brandy. I have seen intense nausea controlled by it in a very few minutes. Others may have other means, but I have tried the brandy and know what it can do. I am pleased with Dr. Brown's outspoken plainness. He and I are agreed on that point; but we are not agreed on the subject of alcohol. If the Doctor visits Europe, and goes through the European hospitals, he will find alcoholic stimulants of some kind at every bedside. That does not look as though its use were being abandoned. They are using rather less of it in London than they formerly did; but on the Continent it is very freely used, and especially in the treatment of low forms of fever and in the surgical wards. Physiologists and chemists have been busy for a great many years with the question whether alcohol is a food or not; and the latest researches by Anstie and others show that it is not returned from the system unchanged, as has been claimed for a number of years by the advocates of total abstinence. At any rate, the question is still generally regarded as an unsettled one; but Dr. Brown settles it for us, by telling us that it is neither food nor physic.

DR. BROWN: I would like to read a short article from the *New York Tribune* on this very subject.

DR. BECKWITH: I think a newspaper article would hardly be admissible here; it might be in the paper, and yet there might be no truth in it whatever.

N. R. MORSE, M.D., Salem, Mass.: I wish to say a few words regarding the use of external applications for puerperal fever. I have used, with great success in several cases, a preparation of an ounce each of garlic, black pepper, and flaxseed, made into a mess with hot water, and applied, steaming hot, to the abdomen. My knowledge of it was derived from a French woman, who had it from an Indian squaw. Now this may sound strange to you, but the first case I applied it to was one that I regarded as utterly hopeless, and in less than two hours after the first application the patient was undoubtedly very much better, and soon got well. And I have seen it act just as promptly in other and desperate cases, where all other means had apparently failed. In these cases I used remedies internally also, and I ascribe in part the cure to their effects, but I had been using remedies without good effects before I resorted to this application. It seems to me that we should do anything in these desperate cases that will have a tendency to relieve the patient; resort to any means at all, and depend on the power from behind—the *vis a tergo*, or by whatever name you may choose to designate it—that pushes on toward recovery. In regard to the question of infectiousness, I will relate an incident. A physician in my neighborhood had five or six cases of puerperal fever in his practice; he became greatly distressed, and more particularly because his wife's confinement was imminent. So he went away and left his practice to me. There were no more cases occurred, and although his wife was greatly alarmed when taken in labor, fearing she would take the dreaded disease, I encouraged her, and assured her she was in no danger, and she had not a single untoward symptom.

HENRY NOAH MARTIN, M.D., Philadelphia: I claim to be a homœopathic physician, and, as a general thing, I neither use nor approve of the use of external applications or other adjuvants; but I am free to confess, that if I stood before an apparently hopeless case, such as Dr. Morse described, and other means had failed, I would do just as he did, and use anything that offered any hope of benefiting my patient. I believe I have never had a case of true puerperal fever; certainly none like the rapidly fatal cases here described. I have had cases of fever after confinement, but not of the character described by the gentlemen of this bureau, nor such as I have read of in the books. My impression is that women suffer sometimes, and have fevers, because they are not sufficiently nourished immediately after confinement.

I do not hesitate to feed them well, if I find that everything is going on properly. If they feel comfortable after the baby is born, they generally get hungry almost at once, and I usually allow them a chop and some bread and butter, and tea or cocoa, and let them go on from that time taking proper nourishment. It seems to me, both in theory and in experience, that the old-fashioned plan of half starvation, of giving slop victuals, is wrong in principle and practice; at any rate I have not followed it, and on the contrary, have my patients well fed. I am not in favor of the bandage at all, except in a few instances; and I believe that much harm is ordinarily done by its use, such, for instance, as the indications of, or perhaps rather the liability to puerperal fever; and if it is used, the physician should himself apply it, and always see to it afterwards that it occupies the proper place. Do not permit the nurse to put on the bandage, and do not take her word for it afterwards that it is all right. I never use stimulants for puerperal women. Milk is a favorite article of diet for the sick with me. I allow my fever patients to drink as much of it as they may wish, fresh and cold. I have never seen diarrhœa result from its employment.

DR. BALL: I have used the bandage for forty years, and I do not allow the nurse or any one to put it on for me. I was awkward at first, while I was quite a young man, but I soon got in the way of it, and achieved the reputation of putting on the bandage very nicely. I used to starve my patients in the good old-fashioned style, but I got over that, and now I feed them well. I think some of my own children were lost by my not sufficiently feeding the mother. How could she properly nourish her children when she herself was not sufficiently fed?

I wish to say a few words on the subject of alcohol. At an early period in my life I adopted the principles of teetotalism, and I have not even used alcohol in my practice since then. I have failed to use it not solely on account of my temperance principles, but because I was and am convinced that the only effect it can or does have upon the system, whether adminstered as food or medicine, is a pernicious one. I believe that no one claims that alcohol is absolute food, but simply that it arrests waste. People who indulge freely in alcohol grow fat, therefore, not because the alcohol contains beneficial and nutritious material, but because the waste is interfered with, the retrograde metamorphosis is partially arrested or slowed. Now, is it best that the retrograde metamorphosis should be retarded, and that tissue-cells should last, unchanged, longer than they were intended to last?

S. LILIENTHAL, M.D., New York: I think we had better

confine ourselves to the discussion of puerperal fever and its treatment, which is rapidly getting out of sight.

W. H. HOLCOMBE, M.D., New Orleans: The question has been raised as to whether puerperal fever is a contagious disease. The contagious diseases are few in number, and the eruptive fevers, yellow fever, hooping cough, and a few others, almost fill the list. Is it not singular that a disease confined to the female system and to the sexual organs should be of a contagious character, as it certainly is contagious? I have often asked myself whether or not it was specific, since all other contagious diseases are specific. They very rarely occur more than once in the same individual; and the question has addressed itself to my mind very frequently, do women who have puerperal fever once ever have it again? or, in other words, does an attack of puerperal fever give comparative immunity from its influences? And this point it would be worthy the time and trouble of this bureau to settle, by collating statistics from all sources.

I have had but very few cases of puerperal fever to treat, and those few were generally fatal. I have nothing to say on the subject of treatment, except that I differ with Dr. Sanders, as to his views of the importance of restoring the lochia and milk in these cases. My old friend and former partner, Dr. Davis, of Natchez, who is one of the most skilful of physicians, was very successful in the treatment of puerperal fever. He gave Aconite, Belladonna, and Bryonia, each of the first dilution, in rotation every half hour, with applications to the abdomen of hot water and turpentine. I would call your attention to the *sulphocarbonate of soda* as a remedy for vomiting. I have used it repeatedly in cases of yellow fever, giving a dose every time vomiting occurred, and with the very best results. And I would also call your attention to the possible good to be derived in these cases from the application of collodion to the abdomen. I have used it in cases of peritonitis occurring in men, spreading it over the entire abdomen, and have found it to have a wonderfully sedative and beneficial effect. As to alcohol, I regard it as poor food, but a splendid medicine. It should be for sale in the drug store only, and be taken only under the advice of a medical man. I had a case of dropsy once, when tapping was necessary, but the patient positively declined to be operated upon unless he could take chloroform, and I was afraid to administer an anæsthetic for fear his heart, which was diseased, would give out under its influence. By the advice of an old surgeon of New Orleans, I gave him a plump dose of brandy, and then chloroformed and tapped him, without any bad results, and subsequently operated several times in the same manner. Although

alcohol is unquestionably a great enemy of our race, yet I would not like to see it expunged from the list of medicines.

T. F. ALLEN, M.D., New York: I have been very much interested in the alcohol question, and have made it a matter of special study during the past two or three years. Dr. Anstie, of London, has made, as you know, a great many experiments with alcohol, to ascertain its exact influence on the healthy human system. Its first effect seems to be to increase the action of the heart and to paralyze, as it were, the vaso-motor nerves and cause overdistension of the capillaries; then following on that you have a slow pulse and retarded heart's action. Dr. Holcombe mentioned giving alcohol before chloroform, that the alcohol might get at the heart first and stimulate it, prior to the chloroform coming upon it to paralyze its action. You can see the rationale of its action here. Dr. Anstie's experiments have exploded the former opinion that alcohol, by its rapid decomposition in the system, produced an amount of heat. He has shown that it is not rapidly decomposed or eliminated, but rather slowly, and that it is stored up in the system. And it not only has a paralyzing effect upon the vaso-motor nerves, and remains in the system for some time, but it also hinders or puts a stop to the endosmotic and exosmotic action of the tissues; and this is a very important part of its action.

Therapeutically, my own impression is that alcohol may be used as a temporary bridge over some frightful chasm; a case, for instance, where the terrible rapidity of the disease would, in a short time, carry off the patient, and there is no other agent so powerful to check it as alcohol. It may stop the disease for a time, until nature and medicines can have a chance to act. I should certainly use it in such cases, and I should certainly not say that it should never be used as a medicine.

R. LUDLAM, M.D., Chicago: Concerning the suggestion made by Dr. Holcombe, as to applying collodion to the abdomen in cases of peritoneal inflammation, it seems to me to be both practical and useful. I think, however, that the preparation of collodion with castor oil would be the best, and I have used it for these cases. If the oil is not mixed with the collodion, that article, as you know, will contract and crack, and thus defeat the object you wish to attain. Concerning the use of alcohol before chloroform, it has come to be a common practice in most hospitals. In our hospital in Chicago we use ether instead of chloroform as being safer, and we always give the patient what is called a good drink of whisky or brandy before administering the anæsthetic. It works very well in the way in which Drs. Holcombe and Allen referred to, and it has a tendency to prevent

vomiting, which is very desirable and important. In all sorts of operations upon the abdomen, and more particularly ovariotomy, the patient comes from under the influence of the anæsthetic very nicely when the alcohol has been given in advance, and besides it does not require near so large a quantity of the ether to produce anæsthesia, when the alcohol has been previously used. Now I do not like to hear an article of so much value so soundly abused, and I certainly would not like to be deprived of its services in my professional business.

I think Dr. Martin hit the point when he suggested that some cases of fever, occurring during the puerperal state, were due to starving the patient. The old starvation plan of diet I fully believe was a fruitful source of fevers. My rule is to feed well at once, but of course I make some exceptions to this rule. And in regard to the bandage, I do not object to its use if it is properly applied; and if it is properly applied—and it should not be used in any other way—I do not see how it can cause puerperal fever any more than tying the cord can, and I never knew that to produce puerperal fever. This is the first sectional session held by any bureau, and I think it has been a success. It has been an "experience meeting," from which we have all, no doubt, derived some profit.

O. B. GAUSE, M.D., Philadelphia: I wish to say a few words, principally to indorse what Dr. Ludlam has said in regard to this meeting being a success. I anticipated a good discussion on puerperal fever at the meeting of the Institute, and should have been much disappointed if this meeting here now had not been a success. I am sure I have been both pleased and profited, and I believe we all have. In regard to the use of alcohol in puerperal fever, I recommended its early use in that disease, because I regard it as capable of interfering with and arresting the progress of the intense blood poisoning that is going on and is killing the patient. I did not recommend it as a *dernier ressort*, but believe that if good is to be done with it, it will be in the early stages, before the poisoning has become so intense.

GEORGE W. SWAZEY, M.D., Springfield, Mass.: Dr. Ludlam has spoken of our meeting this afternoon as an experience meeting, and I acknowledge that it has been refreshing to me. But I wish to speak as to my inexperience with puerperal fever, as it has been my good fortune to not see such cases as have been described; and I am inclined to attribute this, in part at least, to the watchful care I have for the pregnant woman, and the confidence I try to inspire her with. As to alcohol I will just say that I am not opposed to its use therapeutically, and do find use for it quite often. I am much pleased with the generally

liberal tone of the remarks on this subject. I must remark, however, that although we are assembled here as homœopathic physicians, I have heard in the discussions very little of homœopathy. We have talked about infectiousness, and adjuvants, and alcohol, but not a word about the homœopathic treatment of this dire malady. I must say, however, that I am not sorry to notice it. It shows how elastic our profession may and should be under certain circumstances. It shows that we are imbued with the sense of responsibility to our patients; that our best efforts are for them, and that we are willing to do anything that will be of benefit to them. And in listening to those gentlemen who speak as though they had for themselves narrowed down their method of treatment to a single plan, and who would like to so narrow it for others also, I cannot help the feeling that they have not done their whole duty to their patients and themselves, that they have not been equal to the emergencies in which they were placed.

If I am not mistaken, I heard Dr. Sanders say that under certain circumstances, he would not allow a patient a drop of water, no matter how great the importunity. I wish merely to say, that the whole experience of my life is just in the opposite direction, *i. e.*, that there is no circumstance that contraindicates the use of water.

The meeting then adjourned.

SECTION V.

REPORT

OF THE

BUREAU OF SURGERY.

E. C. FRANKLIN, M.D., ... St. Louis, Mo.
N. SCHNEIDER, M.D., ... Cleveland, O.
L. PRATT, M.D., ... Wheaton, Ill.
W. TOD HELMUTH, M.D., ... New York.
L. H. WILLARD, M.D., ... Alleghany, Pa.
H. F. BIGGAR, M.D., ... Cleveland, O.
J. H. McCLELLAND, M.D., ... Pittsburg, Pa.
M. MACFARLAN, M.D., ... Philadelphia.
GILES M. PEASE, M.D., ... San Francisco.
S. R. BECKWITH, M.D., ... Cincinnati.
J. G. GILCHRIST, M.D., ... Tidioute, Pa.
M. W. WALLENS, M.D., ... Somerville, N. J.

TO THE

TWENTY-SEVENTH SESSION

OF THE

American Institute of Homœopathy.

VOLUME II. NUMBER 1.

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I.

FRACTURES OF THE CRANIUM.

By E. C. Franklin, M.D., St. Louis, Mo.

The subject for consideration at the present session of the Institute, that of "Fractures and Dislocations," comprehends one of the most valuable, and, at the same time, one of the most useful departments of practical surgery.

In this country, where the practice of the healing art has not been divided up into specialties, every practitioner is supposed to be acquainted, as his sign too often indicates, with both the departments of "medicine and surgery." He is, therefore, ready at a moment's notice, either to be summoned to the bedside of a patient sick with typhoid fever, or to be ushered into the gloomy chamber of one who is prostrated with *shock* attendant upon some severe and perhaps fatal lesion of the brain or its bloodvessels.

It is on this account that every practitioner should be thoroughly indoctrinated and practically educated in this department of surgery, that he may be the more competent to meet and carry to a successful issue the various forms of fracture as they occur in the daily rounds of busy professional life.

Of the great importance of this subject, and the frequent difficulties and perplexities that attend it, let me quote the observations made by Prof. Gross in the following words: "If I were called upon to testify, under oath, what branch of surgery I regarded as the most trying, and the most difficult to practice successfully and creditably, I should unhesitatingly assert that it was that which relates to the present subject, and I am quite sure that every enlightened practitioner would concur with me in the justice of this opinion."

Oftentimes of difficult diagnosis, and amid surroundings calculated to dishearten and thwart the best purposes of the surgeon, they constitute the most trying and perplexing department of surgery to practice either creditably to the attendant or successfully to the patient. "I never treat a case of fracture, however simple," says Gross, "without a feeling of the deepest anxiety in regard to the ultimate issue; I cannot retire at night or rise in the morning without a sense of discomfort so long as I am conscious that, despite my most assiduous attention and my best directed efforts, my patient is likely to become deformed and lame for life."

With such expressions of the responsibilities attending the treatment of fractures as felt and expressed by this great surgeon, I will be pardoned, I trust, for reiterating the deep interest that should be felt in the consideration of this important subject by every practitioner of the healing art, and especially so among the disciples of our own school, who are constantly exposed to the criticisms and innuendoes of a watchful and too often unprincipled enemy.

Fractures of the cranium necessarily imply the existence of a certain force applied to the bones of the skull, either *directly* or *indirectly*, and terminating in a solution of continuity of the osseous substance. All direct fractures of the cranium implicate, to a greater or less degree, the overlying tissues, which correspond in their nature and treatment to the various kinds of wounds* affecting the integuments of other portions of the body, and demand very much the same treatment.

Direct Fracture.—For practical purposes, fractures of the cranium may be conveniently arranged into those which affect the *vault* and those which implicate the *base* of the skull, and may occur at any portion of the cranium, and assume every variety of configuration, from the slightest fissure to the greatest loss of substance, the form of the lesion corresponding with the object producing it. Thus, if the injury be caused by a large, blunt object, or by a fall upon the vertex, it is more likely to terminate

* See Injuries of the Scalp and Cranial Arch, published in the Transactions of the American Institute of Homœopathy, for 1870.

in a *fissure*. If, however, the injury be inflicted by a sharp instrument, as the edge of a solid substance or other cutting surface, the fracture will probably become *starred*, with depression of one or both plates.

Indirect fracture, or the fracture by *contrecoup* of older writers, occurs when the violence is applied indirectly; that is, when a person falls from a height upon the vertex, and receives a fracture at the base of the skull, the weight of the body impinging upon the base, through the vertebral column. Effects similar to this occur when the occipital bone is broken in consequence of a blow applied to the forehead, and the parietal bone of one side is broken by a force applied to the other. Fractures of the cranium likewise take place in consequence of some inherent peculiarity of the bone itself, as extreme thinness or brittleness. "It is by no means uncommon," says Prof. Gross, "to see skulls which are so exceedingly thin as to be quite translucent, not at one point only, but nearly through their entire extent." In my museum, containing many specimens of fractured bones, collected during my service in the army of the rebellion, there are several specimens of this character, where the thickness, throughout the entire extent, varies from a line to a line and a half at the thickest part. When to this thinness is added brittleness in the vaulted arch, it can be readily inferred how slight a blow will produce fracture at the point struck, or at an opposite one. Other skulls, on the contrary, from their dense and unyielding structure, resist the most severe blows without yielding in the least to the force applied. In *childhood* the osseous structure is soft and elastic, and yields to external violence, being depressed rather than broken, and soon returns to its normal condition. It is on this account that the craniums of children are so seldom broken by external force, which furnishes a diagnostic symptom of considerable value in injuries done this organ. A case mentioned by Green happily illustrates this condition of the pliability of children's skulls, in which he says: "The bowl of a dessert-spoon might be laid in the hollow produced in the skull by a blow, and no symptoms resulted."

Fractures of the vault, as a rule, are always direct, the bone yielding at the point struck, the result being either a simple *fis-*

sure or a more or less shattering of its structure, the bone being broken into many fragments.

The *fissure* almost always takes place at a point removed from the seat of injury, is often confined to a single bone, and of limited extent; at other times it may spread through adjoining bones, reaching from the vault even into the base.

The *comminuted* fracture takes place at the point struck, is much less disposed to spread, is produced by a more or less concentrated blow, and is limited to the seat of the injury.

It may sometimes happen, however, that there will be a coexistence of both fissure and comminuted fracture in cases when the violence, acting on a large surface, has been of an intense character.

Fractures of the vault may be limited either to the external or internal table of the skull, or both bones may be implicated, the broken bone retaining its proper bend, or be driven inwards or outwards, the latter, however, being of rare occurrence.

The displacement inwards is of very common occurrence. The external table alone may be driven in, which may occur at any portion of the vault, but especially in the region of the frontal sinuses, where the depression may be very extensive without any displacement of the inner table. The inner table alone may be broken and depressed without a trace of injury about the outer parts of the bone.

In the classification of injuries of the cranium, I have adopted the following division* as the most convenient and satisfactory:

1. *Simple fracture with depression.*
2. *Simple fracture without depression.*
3. *Compound fracture with depression.*
4. *Compound fracture without depression.*
5. *Fracture of the base of the skull.*
6. *Punctured fracture.*

The dangers attending fractures of the cranium may be arranged as follows: 1st. Concussion; 2d. Compression by extravasation of blood within the cranium; 3d. Compression by pres-

* Published in the Transactions of 1870.

sure of the internal table upon the brain; 4th. Excessive loss of blood externally; 5th. Inflammation of the brain or its membranes.

1. *Simple Fracture with Depression.*—In this species of fracture the integuments are more or less contused, with considerable stunning of the patient by the injury; there is not only compression with fracture of the inner table of the skull, but there is also displacement, the injury being correspondingly severe in proportion to its extent and the portion of brain impinged upon. Thus the anterior and superior surfaces of the cerebrum do not seem to be so readily affected as the lateral and posterior portions. Whenever compression becomes serious, and there is no means of getting rid of the cause by opening into the injured portion, or elevating the depressed portion of bone, the operation of trephining should be resorted to as soon as possible. If, on the contrary, the symptoms of compression do not increase, but rather diminish during the hours of suspense, it should not be undertaken. Under certain circumstances there may exist considerable depression without symptoms of compression becoming manifest. In other cases there may be a severe fracture with considerable comminution of bone, the spiculæ formed thereby producing inflammation and its attendant suppuration by pricking the coverings of the brain or brain-substance. Under such circumstances the only alternative left for the surgeon is to remove, by operative procedure, the depressed bone and spiculæ. If the injury, on the contrary, is marked by slight depression only, as will be manifest by accompanying phenomena, the proper course for the surgeon is to bide his time and watch the case carefully.

The *symptoms of compression* are well marked, and may be thus recognized: A comatose condition, with dilated pupils and stertorous breathing, which are more or less modified according to the amount of depression and portion of brain injured; the surface of the body is extremely pale; pulse feeble and irregular, with vomiting, and more or less paralysis of the whole body. In other cases consciousness is entirely lost, total paralysis following, with involuntary discharge of fæces and retention of urine; the breathing is stertorous, resembling that of apoplexy, with red, turgid face; drooping of the eyelids, as if paralyzed;

distortion of the mouth; protrudent and staring eyes, with insensible and dilated pupils, or one pupil may be contracted and the other dilated.

2. *Simple Fracture without Depression.*—This kind of fracture is by far the most frequently met with, and the danger resulting therefrom is correspondingly diminished. If the fracture be of little severity after the symptoms of concussion have passed away, little else is required under ordinary circumstances than to moderate excessive reaction, apply cooling lotions locally, keep the patient quiet, and combat any unpleasant circumstances as they may arise.

3. *Compound Fracture with Depression.*—In this variety of fracture the injury of the bone is associated with a wound in the scalp, communicating with the bone trouble; the patient is necessarily placed in greater jeopardy than either of the foregoing forms, and the prognosis should therefore be guardedly given. The tendency to inflammatory action is greatly increased, and continues with greater persistency, and requires more caution, watchfulness, and judgment on the part of the surgeon to carry the case to a favorable issue. It is the simple fracture with depression, greatly aggravated in all its phenomena, and is therefore to be treated promptly and with decision. A communicating wound in such a fracture may prove advantageous by permitting the outward escape of effused fluids, and prevent injury to internal parts. In this variety of fracture, especially if the symptoms of compression increase from time to time, there should be no time lost in performing the operation of removing the depressed bone. The wound of the soft parts will become a guide for the surgeon to find the injured bone, which may be freely divided, and the blood scooped out, so as to expose the vault at the point of depression. Such a fracture may be comminuted or depressed, or both comminuted and depressed, and attended with or without compression of the brain. The soft parts are generally contused and ecchymosed and swollen, with more or less hemorrhage. The symptoms may be those of shock merely, assuming at one time a severe and protracted type; at another, the concussion and compression may take place at the same time, and continue on, step by step, until reaction is produced, or the

patient succumbs to the injury sustained. If the hemorrhage is copious and protracted, the powers of life are proportionately shocked, and the danger is imminent.

In this accident death usually occurs, first, from shock, the patient being unable to rally from the severity of the injury done to the nervous system; second, from inflammation and its consequences; and, thirdly, from the existence of fungus, and destruction of brain tissue, and loss of cerebral substance.

4. *Compound Fracture without Depression.*—This form of fracture is not at all uncommon, and consists of an injury done the external table, with more or less contusion and laceration of the soft parts, the patient being more or less stunned by the accident. However trifling the lesion of the osseous structure may be, the injury done the scalp is more or less severe, and the accompanying hemorrhage considerable. The *wound communicating with the seat of fracture,* whether it be a mere crack or fissure of the external table, or a partial or complete breaking up of the outer layer of bone, renders this form of fracture compound. The fissure may involve either the substance of the bone or be confined to the course of the sutures, varying in extent from a few lines to as many inches, and may be caused by the force acting in a direct manner, or by *contre coup* as previously stated.

5. *Fracture of the Base of the Skull.*—This form of fracture is almost always the result of indirect violence, and is usually produced by falls upon the vertex, or by severe lateral pressure, the head being caught between two opposing bodies. In certain persons where the bones at the base of the skull are remarkably thin and brittle, it may be caused by falls upon the buttocks, knees, or feet. Many interesting cases of injury done to the brain have been collected by various authors, in which scissors, slate-pencils, tobacco-pipes, bayonets, etc., have been thrust into the orbits, the nostrils, and occipital bone, into the substance of the cerebral tissue. In an exceedingly interesting case reported by M. Chassaignac, it was found that the condyle of the lower jaw had been driven into the middle fossa of the skull; the patient lived for several months and died with brain symptoms. It is in such cases that the surgeon is likely to be thrown off his guard, from the apparently slight injury observed in the external

parts, and overlook the actual damage done to the brain. Two or three days may pass away without any important symptoms being manifest, the patient going around as usual, when of a sudden brain symptoms are developed, the patient dying in a few hours, or at the best lingering for a day or two, and the true nature of the case being revealed only by the post-mortem examination. These fractures at the base of the skull are very common; so much so, says a late writer, "that they form by far the greater part of the fatal injuries of the head occurring in our civil hospitals; such fractures were, for the most part, and for a long time looked upon as fractures by contre coup. But modern researches have proved that fractures by contre coup are very rare at the base of the skull; and a close analysis of fractures of the base shows that the bones of this region may be broken in different ways."

"A blow upon the perpendicular portion of the frontal bone may give rise to a fracture of the orbital plate, without any injury whatsoever being perceptible in the intervening osseous tissue."

The theory formerly held by Earle, Benjamin Brodie, and Hilton, that the cause of fractures at the base of the skull was produced by the impulsion of the spinal column against the condyles of the occipital bone, has been disproved by Dr. Aran, who claims that most of these fractures are the result of forces acting otherwise.* "He was the first to prove, by experiments, how certain fractures came to be strictly limited to certain regions, in precipitating a large number of bodies from various heights on to the head. Dr. Aran found that the part of the vault which first struck the ground gave, as it were, the key to the fracture which would take place at the base. Similar results were also obtained when diffused blows were dealt upon different parts of the skull by means of a large and heavy hammer. In the front part of the vault, injuries thus produced led to a fracture of the anterior fossa; in the middle part of the vault they led to a fracture of the middle fossa; and at the back of the head, to a fracture of the posterior fossa. In no single instance

* Holmes's System of Surgery, vol. ii, p. 279.

was a fracture detected at the base, without a line of fracture in the corresponding part of the vault. Taking then, these experiments of Dr. Aran's, it will be found that the line of fracture, instead of beginning at the base, starts from that part of the vault which was first struck, and stretches from thence to the base, and the truth of this has been proved by an analysis which I made of all the cases of fractured base of the skull admitted into St. George's Hospital during a period of ten years, in the great majority of which the cause of the fracture was either a fall from a great height, or a blow from some heavy instrument.

"But to trace out these fractures accurately, the skull must be divided into three different zones or segments; an *anterior* zone, formed by the frontal, the upper part of the ethmoid, and the fronto-sphenoid; a *middle* zone, by the parietals, the squamous and the anterior surface of the petrous portion of the temporals, with the greater part of the basi-sphenoid; and a *posterior* zone, including the occipital, the mastoid, and the posterior surface of the petrous portions of the temporals, with a small body of the sphenoid.

"With the skull thus divided, the line of fracture, in the less severe cases, is strictly limited to one of these zones, but of twenty-five cases, the line of fracture was found to be thus strictly limited to the anterior zone in five cases; to the middle one in fourteen cases; and to the posterior one in six cases.

"In severer cases, the line of fracture starting from the vault spreads into two of the fossæ at the same time, and this is readily accounted for by the portion of the middle fossa, which wedged in between, and firmly articulated with the bones of the other fossæ, either receives or transmits the injury. Thus, out of twenty-nine cases in which the line of fracture occupied two of the fossæ at the same time, in fourteen it was the middle and anterior fossæ which were implicated; and in fifteen the middle and posterior. In the more severe cases, all three fossæ may be implicated at the same time; but within the last ten years this happened only in ten cases."

In this analysis it is clearly demonstrated that the middle fossa is much more frequently the seat of fracture than all of the other fossæ put together, for out of sixty-four cases of fracture at the

base of the skull no less than fifty-three occurred in the middle fossa.

It is, therefore, not so much in consequence of the fracture itself that the great danger exists in these injuries at the base of the skull, but the damage inflicted upon the soft parts, and more especially the brain-substance, that invests them with so much seriousness to the intelligent surgeon. As soon as he examines the case, he appreciates the extent of the injury and its effect upon the patient, for there appears the symptoms of concussion conjoined with compression, which follow close after the violence inflicted. The countenance is pale and clammy, the pulse feeble and scarcely perceptible, the pupils are largely dilated, respiration is carried on almost mechanically and is hardly recognizable, in fact, only the faintest evidences of sensibility are manifest. If we examine the ears, blood will be found in the external orifice, and the nose and mouth will give evidence of extravasation of blood from the vessels internally lacerated.

Serum, or rather a watery fluid, may escape from the ears in some cases, especially where the injury has been very severe. This watery discharge was first pointed out by Stalpartius van der Wiel, as early as the year 1727, in which he published a case where large quantities of a thin, clear, watery fluid had escaped from the ear, for several days after a severe injury of the head. Following him, Langelottus, O'Hallaran, and the elder Dease, mentioned cases of the same kind of watery discharge following severe injuries of the base of the skull; notwithstanding this peculiarity was pointed out and commented upon by the profession by these writers so early, there seems to have been an interregnum, when little attention was given the subject until we come down to a period of about a quarter of a century ago, when M. Langier, "by some carefully made dissections, first brought to light the coexistence of this watery discharge from the ear, with a fracture of the petrous bone and a rupture of the membrana tympani. This discovery opened the door to investigation, from which sprung the *two* opinions: first, that this discharge consisted of the serum of the blood extravasated through the lacerated walls of the vessels; second, that it is dependent upon the escape of the cerebro-spinal fluid, and that "its evacua-

tion through the ear is effected by the rupture of the cul-de-sac of the arachnoid membrane, which surrounds the auditory nerve as it passes along the auditory canal in the petrous portion of the temporal bone." This discharge is usually most abundant in young persons, takes place soon after the accident, and after continuing for two or three days gradually disappears, several ounces having been lost in the interim. Fracture at the base of the skull is a very serious accident, and the recoveries are exceedingly few, in comparison with the number of injuries of this kind. Professor Gross remarks "that out of at least a dozen cases of the kind, he witnessed only *one* restoration;" but thanks to the beneficent system of similia, the results of its practice are superior to that of the old school, as shown by that distinguished surgeon and scholar. In seven cases which have fallen under my own observation, both in civil and military practice, where the injury was of the severest character, with the accompanying watery discharge, *two* recovered entirely, the third one lived for several months, and finally died of epileptic convulsions. The treatment of these cases was conducted entirely upon the principle of overcoming the shock by proper remedies, and controlling the subsequent inflammation by those medicines homœopathic to the pathological condition involved.

Punctured Fracture of the Cranium.—This form of injury, like the same character of wound in the soft parts, consists of a small circumscribed opening in the vault of the skull, attended with depression of both tables, the inner layer being always more broken and displaced than the outer. It is always produced by a sharp or probe-pointed weapon, as a bayonet, dirk, nail, or the pointed extremity of an iron railing, and necessarily implies more or less contusions of the scalp, and laceration of the soft tissues covering the cranium.

This form of fracture is rarely attended with compression, for, although the inner table of the cranium may be considerably depressed, it rarely happens that the depression is of such an extent as to produce the symptoms peculiar to compression. Occasionally, a small spiculæ of bone may be driven into the membranes of the brain, or even into its medullary structure, producing serious trouble. It may be recognized by inspection

and digital exploration, aided in doubtful cases by the use of the probe, which will reveal to the intelligent practitioner the nature and extent of the depression. In *every* case of punctured fracture it is incumbent on the physician to make a clear and thorough examination, as there is a decided tendency to serious results. "However simple," says Professor Gross, "a punctured fracture of the skull should always be regarded as an occurrence of the most serious character, from which, unless it be properly understood and treated, few persons ever make a happy escape. The great danger is inflammation of the brain and its membranes, frequently coming on within a few days of the accident, and sure to terminate fatally if the case have been neglected or mismanaged. Should the patient be so fortunate as to escape with his life, he can scarcely fail to suffer afterwards from cerebral irritation, especially epilepsy and mental imbecility."

Therefore in all cases of punctured fractures of the skull resulting in splintering of the internal table, trephining should be immediately resorted to, for the purpose of removing the fragments, and to relieve other dangerous symptoms. Head troubles of a serious character are certain to supervene if the operation be not promptly performed. This remarks holds not only with reference to gunshot wounds splintering the internal table, but with those made by a sharp instrument.

It is often a difficult matter to convince a patient who is suffering from the effects of a punctured wound, however small in degree, that an operation is actually necessary; but it is the surgeon's duty to state the facts fairly, and go over the serious consequences that may result from the let-alone treatment, thus leaving the responsibility of the case to the patient.

Gunshot wounds are always punctured as to their form, but contused as to their surface, and consequently bleed less than incised wounds in the same direction, hence in this variety of injury we find both the characteristics of punctured and contused wounds. The extent of injury done the *internal* table in gunshot wounds or punctured wounds, is doubtless occasioned by the diminished amount of momentum or force which the object acquires before it reaches the internal lamina, the point of exit in all cases of forcible passage, through both soft and hard tissues,

being greater than the entrance, as has been abundantly demonstrated in gunshot and other similar injuries. Appearances of the part vary, as well in solid as in soft tissues, with the velocity of the ball, the entrance being most and the exit least distinctly characterized when the momentum is greatest, and *vice versâ*.

In cases of punctured wounds by gunshot, symptoms of compression do not manifest themselves until several hours, and even days after the injury, as will be seen by reference to the cases hereafter mentioned. Under such circumstances it will be well for the surgeon to treat the wound as a *contused* or *lacerated* one, according to the conditions presented. If symptoms of compression exist, or if they increase, the operation should be done promptly, and the proper time for determining it in all cases is regulated by the particular features of the case. Should depression of the skull be associated with a wound of the scalp, penetrating to the bone, a very short trial of the means calculated to supersede the necessity of an operation will be sufficient, as the fracture is already a compound one, and consequently not liable to be aggravated in this important respect by trephining; under other circumstances, two or three days may generally be permitted to pass without any bad consequences.

In some kinds of punctured and incised wounds affecting the scalp, the larger arteries supplying the soft tissues may be divided and bleed to a dangerous if not fatal extent, unless promptly secured. In such cases there is little danger to be apprehended from head symptoms. It is in the *punctured* and *contused* varieties, therefore, to which the interest of the surgeon should be chiefly called. A case of punctured wound of the scalp occurred in my practice a few months ago, which illustrates the danger consequent thereto.

CASE 1. A lady summoned me to her aid, suffering from a punctured wound on the vertex, which the physician in charge of the case thought to be of such slight importance as to require the simplest dressing only. In a few days suppuration set in, with swelling at the place of injury, headache, fever, and other constitutional symptoms, which gave to the case a serious aspect. Having freely opened the swelling and permitted the pus to es-

cape, relief was soon experienced, but it was several weeks before she entirely recovered from the effects of the injury.

CASE 2. C. M., seaman on gunboat Pittsburg, entered hospital steamer, having received a shell wound upon the frontal bone, about two inches above the right eye. The surgeon on board, supposing it to be a mere flesh wound, closed the lips of the orifice with sutures and adhesive strips. Patient walked from the boat to the hospital, and seemed to be ordinarily well, and would not occupy the bed allotted to him save at night. Before examination of the wound, after his entrance into hospital, the ward surgeon, seeing everything looking apparently well, and there being no unpleasant symptoms, did not molest the wound, there being so much labor on hand to take care of those remaining in the ward. Ten days after receiving the wound, he was assisting in nursing in the wards. In the afternoon, at 4 o'clock, he complained of nausea and vomiting; at 5 o'clock was delirious, with stertorous breathing, pulse weak and intermittent, pupils dilated, and he died at 6 o'clock. Post-mortem examination developed an extensive fracture of the os frontis, with depression of both plates of the skull, spicula of bone driven into the brain, and clots outside of the dura mater, with disorganization of the brain, and softening of the medullary substance.

The suddenness of death in this case, and the length of time after receiving the wound, with the fact that the patient showed no signs of cerebral disturbance during the interregnum, are matters of peculiar interest to the surgeon, and point out the necessity, in all cases of injury to the skull, of making a thorough and satisfactory examination.

CASE 3. J. R. K., sergeant, Co. G, 22d Regt. Ill. Vol. Infty., was wounded at the battle of Belmont, November 7th, 1861, and admitted into hospital November 13th, 1861. The injury was produced by a rifle-ball entering the back part of the occipital bone, producing a compound fracture of the skull, about one inch to the left of the lateral sinus. Both plates of the skull were depressed, and a spicula of the inner table driven into the substance of the brain. The depressed bone was removed by the aid of the trephine and elevator. I then trimmed off the serrated edges of the bone, and adjusted the lips of the wound with two

silver sutures. Result, a complete recovery, and the patient was discharged the hospital, cured, January 22d, 1862.

Applications of *Calendula* to the injured part, and remedies given internally, according to circumstances, constituted the treatment in this case. At this time I had not discovered the virtues of *Hypericum* in lacerated and contused wounds of the scalp.

CASE 4. J. S., private, Co. D, 8th Regt. Ark. Vol. C. S. A., was wounded at the battle of Fort Donelson by a musket-ball striking the face about one inch below the right eye, splintering and fracturing the superior maxillary bone, spiculæ of bone penetrating the antrum of Highmore. The ball deflected and passed under the skin and cellular tissue, over the angle of the jaw, through the sterno-cleido muscle. Nearly one-half of the ball was taken out by an incision from the posterior margin of the sterno-cleido muscle, about three inches below the mastoid process. Four weeks after receiving the wound, there being excessive inflammatory action about the parts, the wound was carefully examined, and the other portion of the ball, together with a number of pieces of the superior maxillary, were removed, after which the wound assumed a more healthy character, and rapidly healed.

Dressings of Calendula were applied locally, Aconite given during fever, and Silicia and Hepar, during the suppurative process, conducted the case to a favorable termination.

CASE 5. W. C., private, Co. H, 14th Ill. Vol., received a severe lacerated wound of the scalp, and fracture of the left parietal bone, attended with paralysis of the right arm, produced by a conoidal musket-ball, at the battle of Shiloh, Tenn. He was, when first brought into the United States General Hospital, April 11th, 1862, much troubled with constipation, and with pains in the lower extremities. He was trephined, and a small piece of the ball was taken from beneath the internal table of the skull. On April 15th, the edges of the wound were freshened, and brought together by means of sutures. The subsequent treatment consisted of cold Calendula applications to the scalp, stimulating liniments to the extremities, and frequent doses of Aconite for the accompanying fever. A part of the wound united by the

first intention. He remained in the United States General Hospital, at Mound City, until July 7th, 1862, when he was sent to Keokuk, Iowa, on the hospital steamer City of Memphis; at which time the external wound had entirely united, but the right arm still remained partially paralyzed.

CASE 6. R. W. C., private, Co. ——, —— Regt. Vol., was wounded at the battle of Fort Donelson, February 13th, 1862, by a conoidal musket-ball, causing a fracture of the occipital bone, with depression of both tables of the skull. All the symptoms of compression were manifest; pulse 65, with stertorous breathing, etc. The operation of trephining was performed, setting the instrument close to the left of the depression, and upon removing the disk of bone sawed through, found that the inner table was shelved so much as to make it impossible to extricate the wedged piece without taking out four or five other pieces with the instrument, which was done, and the obstacle was removed. In twenty-four hours after the operation the pulse raised to 85; breathing natural; appetite good; resulting in a rapid recovery. Discharged, June 24th, 1862, cured. Calendula dressings to the wound, Aconite during the febrile reaction, Hepar, Silicea, and China from time to time, as they seemed to be indicated, constituted the principal remedies given during the treatment of the case.

CASE 7. H. O., private, Co. F, 12th Ill. Vol., was admitted into the United States General Hospital, at Mound City, Ill., October 12th, 1862; was wounded at Corinth, Miss., October 4th, 1862, by a round ball entering immediately below the meatus auditorius externus of the right ear, carrying away the lower part of the same, passing forward beneath the zygomatic arch, exterior to the ramus of the lower jaw, through the fossa and upper posterior portion of the superior maxillary bone, across the floor of the orbit, destroying the right eye, and out through the nasal bones at the anterior aspect of the nose. *Removed superior maxilla.* Cold Calendula dressings were applied. Patient is free from febrile excitement; local inflammation slight; pains decreasing from day to day; suppuration moderate and healthy; appetite good; wound healing kindly. October 24th, 1862, was discharged cured.

CASE 8. H. S., the engineer of a railroad train, to avoid an imminent collision, jumped from his engine while running at a very rapid rate, and was taken up apparently dead.

I arrived shortly after the accident, and found him suffering with convulsions, blood flowing from the mouth, nose, and ears. Over the right eye and involving the lid there was quite an extensive gash, from which blood flowed quite profusely. From this wound a portion of brain-substance was protruding, and upon examination the upper part of the orbit was found much broken, and an opening made in the skull large enough to admit the little finger. Having removed all splinters that could be detached, with that portion of the protruding brain, and cleansing it from all foreign substances, the edges of the wound were approximated and held by two sutures and adhesive strips, and an opening left for the escape of blood, etc., which kept up a constant oozing. In three or four hours afterwards he was attacked with a violent rigor, followed by vomiting, and the escape of over a pint of dark coagulated blood. Cold applications of Hypericum were ordered to the injured parts, and Arnica given internally every hour. In eight hours reaction had taken place; pulse 102; temperature of the body good; pupils slightly dilated; tongue coated, and consciousness gradually returning. I now substituted Aconite for the Arnica, continued the dressings as before, and next day found my patient in a more favorable condition than at any former visit. Kept him under the action of Aconite for three days, when I gave him China, and continued it for one week, at which time he was rapidly recovering, and in ten days more returned to his home, apparently in a good state of health. I heard from him in two months after the injury, and excepting a slight headache at times, which yielded to the appropriate remedy, the patient entirely recovered his health and vigor.

Treatment.—The treatment of injuries of the cranium and its tissues covers such a wide field, and is so varied, and so influenced by the individual characteristic of each case, that it is deemed inadmissible in the present paper to give anything more than the general guiding principles that should govern the surgeon in such matters. As the brain accurately fills the cavity

formed by the bones of the head, it is manifest that any cause encroaching upon and diminishing the space naturally occupied by this organ must necessarily impair its functions to a greater or less extent, the result of which may be fatal. To obviate this, and relieve the oppressed brain, an operation is demanded to restore the parts to their normal position.

If compression ensues from depression of the internal table, or effusion of blood within the vaulted arch, and the surgeon is convinced that an operation is necessary to remove the cause of mischief, it should be promptly performed. This may be effected either through the agency of the trephine, scalpel, elevator, or saw, according to the conditions of the case presented to the surgeon.

In *wounds of the scalp*, which in reality belong to the consideration of this paper, the treatment depends upon both the nature and extent of the injury inflicted; the first principles of surgery being always called into requisition, that is, to remove from the wound all foreign particles, agents or objects that may have been driven into it. After thoroughly cleansing it, the hair of the scalp should be carefully shaved for a sufficient space contiguous to the edges of the wound, to enable the surgeon to apply the requisite dressings. The hair about the injured surface should be clipped short, in order to avoid its irritating presence in the wound, and for the better adaptation of the proper bandages.

Incised wounds of the scalp, like the same variety of wounds in other parts of the body, require that their edges be brought together in close apposition, and retained until union be effected, if possible, by the first intention. To retain the lips of the wound in close contact, various expedients have been recommended, such as the interrupted suture, collodion, court plaster, adhesive strips, etc., but I have always found that in slight single cuts, the thorough waxing of a few hairs, and tying them together across the incised surface, covering all with a pledget wet with a solution of Hypericum, and retained by a single roller, was sufficient in all cases to effect union.

If, on the contrary, there are one or more flaps, or the wound is double, I have uniformly employed, with the best results, the figure-of-8, or hare-lip suture, or the silver wire interrupted su-

ture, with the most satisfactory results. The Hypericum lotion as a rule I always apply locally in scalp wounds, and believe it to be, from actual observation, superior to any other remedy of which I have any knowledge.

If the scalp should be torn in strips and flaps, after the process of cleansing has been gone through with, and the hemorrhage has been controlled, the torn portions should be carefully brought together and held in their normal position, as nearly as can be, by the hare-lip suture previously spoken of. Such wounds unite under favorable circumstances, even when they have become perfectly desiccated in consequence of the lapse of time since the infliction of the injury, the parts having been thoroughly saturated with a lotion of Hypericum, before attempt is made to readjust the torn portions.

If there should be loss of scalp substance, still the parts should be approximated as nearly as possible, and the Hypericum lotion kept continually applied by means of moistened linen cloth or the patent lint. The lost parts will be restored, and the deficiency reproduced by granulation and cicatrization, and head complications prevented by the treatment recommended. If constitutional symptoms set in, they should be combated by the internal administration of those remedies that are *en rapport* with the diseased condition.

In *contused wounds* the same treatment should apply as in incised. The additional trouble to be apprehended is the effusion of blood into the tissues, with more or less impairment of their function, followed by inflammation and purulent deposits between the layers of the scalp, erysipelas, and inflammation of the brain and its membranes.

As soon as pus is detected in the process of formation beneath the flaps, or between the lamellæ of the scalp, or under the pericranium, it should be promptly evacuated, and gentle compression applied by means of pledgets wetted with Calendula lotion, and held in position by a single-headed roller or T bandage. Of late I have used, with satisfactory result, the ordinary glazier's putty, and have found it to be the softest and most efficacious means of treating excrescences or tumors of various kinds, when compression is required, as it moulds itself so neatly to the parts.

If the surgeon has been called late in the progress of the case, and finds the scalp separated from the flaps, openings should be made of sufficient size to drain the parts of the incarcerated fluids, then dress and use pressure as previously advised, taking care to syringe the openings twice or three times a day with a weak solution of Calendula, or Carbolic Acid lotion. Fistulous tracks and sinuses are to be treated in the same manner. This character of complication is exceedingly apt to produce much mischief, such as inflammation, suppuration, and disintegration of the pericranium, and possibly exfoliation of the bone; yet, if proper attention be given to these at the onset, little danger will be apprehended.

Effusion of blood beneath the scalp is not of serious import, the extravasated fluids generally disappearing by absorption with the use of simple dressings of Arnica or Rhus radicans, applied by means of a pledget, and all retained by a single-headed roller moderately tight. It has been asked whether, under any circumstance, it may be found necessary to make an incision for the purpose of evacuating the contained fluids; my opinion is adverse to opening into these collections, as it too often gives rise to subsequent inflammation and suppuration extending to the brain, and producing sometimes the most formidable cerebral complications.

The treatment of compressing these tumors by forcible pressure, either with the fingers or by means of bandages, until the blood is forced into the surrounding areolar tissues, cannot, in my opinion, be too severely reprobated.

The neuralgic pains frequently following injuries of the scalp, as a general thing yield to the internal administration of Arsenicum, Belladonna, Ignatia, Nux vomica, Platina, Spigelia, and Silicea; the prominent indications for which may be readily ascertained by reference to the Materia Medica.

Where the pains become excessively violent, the patient being rendered almost frantic by their severity and continuance, the hypodermic injection of morphine near the spot of the greatest pain will be found exceedingly efficacious. In such cases, where the disease is rebellious to all treatment, and is traceable to pinching of the nerve filaments in the healing of the cicatrix, a deep

incision through the scalp to the bone, dividing the trunk of the principal filaments, has rendered permanent benefit. This measure should only be adopted when all other remedial agents have failed.*

The treatment of fractures of the vault of the skull involve some of the nicest and most litigated points of surgical practice, and should be entered upon with the greatest judgment and care.

Fissure or linear fracture, whether simple or compound, unaccompanied by brain symptoms, does not demand operative procedure, but the wound should be treated like all other lacerated or contused wounds, by local applications of Hypericum or Arnica, according to indications, and internal remedies, from time to time, as demanded by the circumstances of each individual case.

In a few cases of fissure of the skull, either simple or compound, it has occurred that suppuration has taken place between the internal table and dura mater, with its corresponding symptoms. In such cases the matter pent up under the bone must be discharged by means of a small trephine, the opening being made of just sufficient size to permit the escape of the confined pus. Great caution should be exercised in the performance of this operation, notwithstanding the brilliant successes that have attended it in the hands of the older surgeons.

Inflammation of the diploë, which occasionally occurs in connection with this form of fracture, is quite serious in its character, from its tendency to spread to the internal table of the skull, involving the membranes of the brain, the veins of the diploë, and ultimately tending to purulent infection and secondary deposits in various organs of the body.

The chief indication of this disease is, that the patient, having recovered from the immediate effects of the injury, remains for two or three weeks in apparent good health; when, of a sudden, he is attacked with pain in his head, referred to the point of injury, fever, and indisposition for his accustomed duties; the wound, if any, loses its healthy appearance, and the periosteum

* Transactions American Institute of Homœopathy, "Injuries of the Scalp and Cranial Arch," by E. C. Franklin, M.D.

will be found to be detached from the bone, which becomes dry and discolored. If the inflammation proceeds unchecked, the same condition of things will take place in regard to the internal table and the dura mater, which will probably end in more or less degeneration of the pia mater and the substance of the brain itself. When this occurs, the previous symptoms will be found greatly aggravated, the fever more marked, with rigors, intense pain in the head, nausea, and sometimes vomiting, drowsiness, delirium, coma, and paralysis. Our remedies will oftentimes accomplish much in averting this threatened trouble. *Aconite, Belladonna, Mercurius, Hepar, Calcarea, Lycopodium, Mezereum, Petroleum, Nitric acid, Silicea, Carbo veg., Phosphorus, Sepia, Sulphur,* and *Thuja,* will be found adapted to meet the requirements in such cases, and if administered according to their several indications, will often restore the patient, and snatch him from impending danger.

If no benefit should be derived from the remedies, and the brain symptoms continue, recourse should be had to the trephine immediately, and the matter discharged. If the lymph or pus lie beneath the dura mater, this membrane must be opened in order that the matter may be evacuated, and the case treated according to existing circumstances.

In *comminuted fractures,* with wound of the scalp and no head symptoms, even though there be depression of the fragments, the non-operative rule holds good. It is the line of treatment in our best directed hospitals, that simple fractures of the cranium, with depression and without brain symptoms, are to be left alone. The "depression may be so marked," says a recent writer, "as to be easily detected, and yet, so long as there are no symptoms, all operative interference of whatsoever kind, is carefully to be avoided." But, whenever in the subsequent treatment of the case, head symptoms are developed and internal mischief is apprehended, then operative measures are to be had immediately.

In all fractures of the cranium with depression, however, the soft parts being broken and the bone exposed, the rule is that the operation is to be performed immediately. It is this kind of skull fractures (*i. e.*, compound) which lead to intra-cranial suppuration, and hence the operation is recommended for the purpose

of preventing subsequent trouble. The following exceptions to this rule is given by Holmes:* "A slight depression, especially when it corresponds to the thicker part of the injured bone, does not require an immediate operation. Neither does a deep indriving of the bone over the frontal sinuses; but here it must be borne in mind that these sinuses do not begin to make their appearance until several years after birth. And should a compound fracture with depression chance not to fall under the notice of the surgeon until some days after the accident, he ought, if there are no signs of inflammation, to abstain from operating, and all the more readily if the depression is a broad one, and the fracture comminuted. In such an injury the patient sometimes recovers without any intra-cranial inflammation. But in the punctured fracture, in which sharp splinters of the inner table are driven down upon or into the dura mater, inflammation almost invariably arises sooner or later; and of all compound fractures of the skull, the punctured fracture is on this account the most dangerous, and the one which most imperatively calls for the use of the trephine. And closely allied to these punctured fractures are those in which a clean cut exists in the outer part of the bone, with more or less extensive splintering and depression of the inner plate. True it is that there may be some difficulty in such cases in ascertaining the exact condition of the bone; but we may be sure that the two plates are separated from each other, and the inner one splintered and depressed, if we can pass a probe sideways under the outer parts of the cut bone, and thus feel the inner plate some distance deeper." In all cases where sharp fragments of bone are sticking into the brain, producing trouble and inflammatory mischief, they should be carefully removed, and the appropriate dressings applied to the parts.

"Passing now to those depressed fractures in which there are primary brain symptoms, are we to operate in such cases? If the fracture is a simple one, and the symptoms not very urgent, we may postpone the operation, and see what can be done by other remedial measures before resorting to the trephine. Slight

* Holmes's System of Surgery.

symptoms may perhaps be dependent upon concussion of the brain, or upon some slight pressure, either by blood or by bone; and such symptoms may pass off under the influence of judicious treatment. But if the symptoms are urgent—if they indicate a decided pressure upon the brain—then operative interference becomes necessary.

"And, from what has already been said, it follows that, with a wound leading down to the bone, we ought to operate at once. If the symptoms are slight, the operation may be successful; but if the symptoms are urgent—if compression of the brain is decided and strongly marked—there is every probability that all our efforts will be unavailing; for in such cases it very rarely happens that the brain symptoms are dependent upon the depressed bone. The severe symptoms in fractures with depression arise, for the most part, from extensive extravasations of the blood or some serious lesion of the brain-substance itself, hence the reason of our operations being so seldom of any use. Still, notwithstanding all this, it is our duty to operate, as the symptoms may, after all, be wholly dependent upon the bone. Cases are certainly now and then met with, in which symptoms of a very urgent nature persist so long as the bone remains depressed, and are relieved only by its removal. Of this the most remarkable case is Cline's, in which the symptoms continued for the extraordinary period of thirteen months, and still were relieved by the removal of the bone.

"As a general rule, a depressed piece of bone may be allowed to remain in a child without producing the serious results so commonly noticed in an adult; and, consequently, we may in a child postpone the elevation or removal of the broken bone, which in an adult we should proceed to operate upon at once.

"In operating for a fracture with depression, the only object is to elevate or to remove the fragments which are driven down. Now if this can be done by means of the elevator only, so much the better. Should this not be feasible, then we must see if we can gain sufficient room for the elevator by the removal of a slip of the sound bone overhanging the depressed fragment; and this is to be done by Hey's saw, if possible. The use of the trephine, as far as depressed bone is concerned, is to be restricted

to those cases in which the edges of the fracture are regular and without corners. And in trephining, great care should be taken to remove as little bone as possible; but, in our anxiety not to remove too much, we must be especially careful, and be sure that no irregular margin of the inner plate is left pressing upon the brain. In looking over the skulls in our different museums, it is curious and most instructive to observe how frequently a sharp edge of the inner plate of the bone has been left depressed.

"After the removal of parts of the skull, it was the custom in former times to protect by plates of silver or lead, or by some other means, the portion of brain left exposed. Of late years, however, this practice has been abandoned; and now the protection of the brain is left to the thickened dura mater and integuments, for it rarely happens that ossification takes place sufficiently to fill up the gap. Patients, under such circumstances, may go on unharmed for years. Occasionally, however, the cicatrix gives way, hernia cerebri follows, and the patient dies.

"Thus it happened to a young girl, in a violent fit of coughing, during which the cicatrix suddenly gave way.

"Finally, in fracture of the vault, injury of a large venous sinus may occur; and in a compound fracture, such an injury may be followed by hemorrhage of an alarming character. But, however alarming such bleeding may at first sight be, it is generally said that the danger is more apparent than real; the bleeding may be profuse, but it is easily controlled. Indeed, M. Chassaignac states that he had not been able to find on record a single instance of fatal hemorrhage from a sinus thus wounded. There is, however, in the museum of St. George's Hospital a preparation of a compound fracture of the skull laying open the left lateral sinus; and in this case the patient, a powerfully built man, aged fifty-one, died of repeated attacks of hemorrhage.

"An injury of one of these venous sinuses may also lead to fibrinous deposits within the sinus, and suppuration with all its secondary consequences. And pyæmia may, as a matter of course, follow any fracture of the vault; but pyæmia is much more frequently met with in the slighter injuries, scalp-wounds, or contusion of the bone. Thus in twenty-three cases of simple scalp-wound or contusion of the bone, which ended fatally at St.

George's Hospital within the space of ten years, purulent infection was noticed in fourteen instances; whereas, in seventy-eight cases of fracture terminating fatally within the same period, it was noticed in six cases only, and even of these five were compound fractures. The fact is, that in far the greater number of fractures the patients die long before the period at which purulent infection usually sets in."

In *fractures of the base of the skull*, even when clearly diagnosed, operative interference is rarely recommended; our treatment being rather directed to the brain-symptoms and other derangements that ensue in consequence of such injury. These cases should be treated in reference to the diseased manifestations, and the various symptoms dealt with as they present themselves. When the injury involves the base of the brain, or the upper portion of the spinal cord, life may be instantly destroyed by arrest of function in the nerves of respiration. The head, after being shaved, should be elevated, and placed upon a hair or moss pillow, and be kept constantly moist with the indicated remedy. Attention should be given to the various excretions of the body, and a catheter used once or twice a day to draw off the accumulated urine if necessary. The patient should be kept in a recumbent or semi-recumbent position, and all excitement avoided, not only during the time of active treatment, but for a long time afterwards. Aconite should be given whenever the febrile excitement is full and free; Gelseminum, Belladonna, and Bryonia in less severe grades of reaction; and the remedies generally employed that corresponded to the morbific manifestations as they become cognizable to the surgeon.

II.

DISLOCATIONS AND FRACTURES OF THE PELVIS.

By William Tod Helmuth, M.D., New York.

Injuries of the pelvic bones are more or less serious according as the viscera are implicated.

From the peculiar formation of these bones, their great strength and their firm articulation, they are not often fractured, or their symphyses separated, without serious injury to those important viscera which lie within the bony basin of the pelvis; yet there are remarkable cases upon record to show that severe injuries of this charcter are not necessarily fatal.

DISLOCATIONS OF THE PELVIS.

It appears that the separations of the symphyses, or as they may be called, dislocations of the pelvis, especially those occurring at the symphysis pubis, are those which are most likely to be followed by favorable results, especially those that occur during parturition; of which I have known three instances, all of which recovered. In Malgaigne's cases, seventeen of which occurred during labor, ten died and seven recovered; and of the four cases attributed to accident, two died and but one recovered. Dr. Bryant (*Practice of Surgery*, p. 944), relates the case of a female aged 30, under his care, in which the pubic bones were displaced on the right side for more than an inch, leaving a curious deformity; the pubic bone, with the adductor muscle at-

tached, being curved out, leaving a hollow on the inside of the thigh.

The same author reports a second case in that of a female child, in whom there was great separation of the pubic bones, the contents of the pelvis being pressed out through the opening; a foot of the large intestine, the uterus and bladder all being outside. This patient also recovered.

It is quite proper to mention here, that an accident of this character, viz., separation of the pubic bones, may occur during a labor, without either the patient or the practitioner being aware of the accident at the time. A suit is now pending in Brooklyn, in which I have been called upon to testify, where just such an occurrence took place.

The separations which occur from violence are much more likely to implicate the pelvic viscera, and therefore are much more serious. Dr. Leute, of the New York Hospital, reports, in the *New York Journal of Medicine* (also quoted by Hamilton), the case of a man, æt. 18, crushed between two cars; there was a separation of the symphysis, and the patient died in two days. The post-mortem revealed a rent in the apex of the bladder large enough to admit a man's thumb.

Sir Astley Cooper gives also a case of separation of the symphysis of about two fingers' breadth, which recovered after a considerable period. (See Cooper and Travers's *Sugical Essays.*)

The most marked case of separation of the symphysis which I have seen occurred in the practice of Dr. Lewis Grasmuck, now of Kansas, and was reported by Dr. S. F. Parsons, in the *Western Homœopathic Observer*, for March, 866. His description of this case shows so well the symptoms of such a condition, that I shall quote therefrom, particularly as I was cognizant of many of the facts, and also had the satisfaction of examining the woman myself.

The patient was the mother of four children; was married at the age of fourteen. Her first child was born during her fifteenth year. The labor lasted nine days, and finally to facilitate the process, large quantities of a decoction of ergot ("half a saucerful every two hours") were administered. "The pains then became intense and constant, and severe local suffering was felt at

the symphysis pubis, growing more and more aggravated at each effort of the uterus. So agonizing were the labor throes, that consciousness was lost three hours before delivery, and did not return for some time thereafter, consequently she knew nothing of what transpired during those oblivious moments." . . . .

Her recovery was slow, and the following were the symptoms noted, which I have numerically arranged:

1. Strangury. 2. Irritation and inflammation of the labia. 3. Constipation. 4. Abscess above the mons veneris which opened above the clitoris. 5. Inability to walk, without severe pain at the symphysis pubis, and also at the right sacro-iliac symphysis. 6. Shooting pains along the right pubic bone, extending down the thigh, whenever movement of the pelvic bones was attempted. 7. *Crepitus* was distinct, and remained for four months, and then disappeared, to return at the second, third, and fifth labors. The above-mentioned symptoms were all present, except the abscess, on each of these occasions. 8. The pains in the symphysis being intolerable, and confining her to her bed during the later months of gestation. In the recumbent position the symptoms were much relieved. When I saw her the arch of the pubis was contracted; there was considerable swelling of the entire vulvæ. 9. On the anterior surface of the mons veneris a groove could be readily detected, showing the separation of the pubic bones. 10. The extremities of the bone were sensitive to pressure. 11. The right pubic bone was found also projecting a little anterior to the left. These were the symptoms that were especially noticeable, and I have condensed them as showing what peculiar manifestations may be present, in order to assist in pointing out the true nature of the case, which might be obscure, especially in the hands of the inexperienced.

The second case of separation of the symphysis which came under my care was congenital, and occurred in that remarkable case of extrophy of the bladder, with one kidney and one ureter, which I have fully recorded elsewhere.

The treatment adopted was, first, the constant use of the catheter if necessary; second, perfect rest in the supine position, a pad on each side of the symphysis, and a wide roller bandage applied around the hips. This appliance is not difficult to put on, but

very troublesome to keep in position. It must be secured by perineal bands, which must be fastened at the pubis and the sacrum, to keep the bandage from riding upward. A well-padded leather belt, with appropriate straps and pads, would, in my judgment, answer the indications better than any other apparatus. During the period that the patient is in the recumbent position, appropriate homœopathic treatment (I meam internal medication), must be adopted. Symphytum is highly recommended by some surgeons of our school, as well as by Dr. Ruddock, of England. My preference is for one of the preparations of lime or phosphorus, or both in combination, as the symptoms may indicate.

SEPARATION AT THE SACRO-ILIAC SYMPHYSIS.

There are not very many examples of this accident upon record. In the memoir of M. Viluysken on the subject, which I find condensed in *Ranking's Abstract*, vol. vi, 1848, there are five cases reported, and in the *Provincial Med. and Surgical Journal* for November 17th, 1847, also quoted in the eighth volume of the same compendium, two others. Besides these cases there is one reported by Philippi, at Chartres; another in 1731, by Bassius; the case by Eneaux, Hoin, and Chaussier; that of Baron Larrey; that of Harris, in the *Journal of the Medical and Physical Sciences, of Philadelphia*, vol. xv, and two cases by Heidenreide, in 1839.

I have condensed the symptoms of several of these cases, as they are especially instructive. In one instance the separation was caused by a fall from a height of six feet upon the left tuber ischii; the patient was a woman aged 24, and the accident occurred on 7th of May, 1798. The suffering at first was horrible at the tuber ischii; there was no crepitation; the limbs were found to be about the same length. After eight days the pain gradually disappeared, and she was allowed to cautiously exercise. In thirteen days the pain returned; the left limb grew *shorter* than its fellow, and the more she walked the more perceptible became the shortening; it amounted to nearly two inches. Every time she endeavored to support herself on her left foot, the body was so suddenly flexed laterally toward the

left side, that it might be said that the superior edge of the ilium approached with violence towards the false ribs. The form and motion of the left leg were unimpaired, but the crista ilii of the left side was higher than that on the right side, but upon steady pressure the elevation could be made to descend to its proper level, the limbs being then brought to their proper length.

The treatment of this case was extension and counter-extension, the patient in the horizontal position, and the parts rendered immovable by an apparatus resembling the splint of Desault; an elastic band eight inches wide was so applied that its upper border corresponded with a line drawn about an inch above the crests of the ilia, and its inferior edge with the lower parts of the sacrum. The apparatus was put on on the 13th of June, and removed on the 15th day of September, the patient being perfectly cured. In another case the limb was shortened after several days; the coxo-femoral motions, however, being executed with freedom and without any pain. The posterior part of the ilium was movable and painful, and the crest of the ilium on the injured side was more elevated than the other. A similar apparatus was applied and a cure resulted.

In another case, besides the above-mentioned symptoms, there was paralysis of the rectum and bladder, and the crests of the ilia nearly touched the false ribs. No attempt was made to reduce the bones, and the patient recovered by being merely kept in the horizontal position.

From these cases to which I have briefly alluded, and from the study of the few others I have been able to find, we may infer that in separations of the sacro-iliac symphysis, there is not immediate shortening, but that from eight to ten days after the injury this condition may occur; in this particular resembling the intra-capsular fracture of the neck of the femur; the diagnosis, however, may be readily made out by remembering that in the latter there is eversion of the foot, inability to raise the heel from the bed, and inability to perform the usual movements of the coxo-femoral articulation. The shortening in the dislocation can be relieved by extension, and pressure upon the elevated crista ilii. In the separation of the bones there may be a sudden falling of the body to one side, when the patient endeavors to

stand on the affected limb. The crest of the ilium is also more or less elevated, and may reach almost to the cartilages of the false ribs. There may be crepitus and preternatural mobility at the seat of the joint, and paralysis of the bladder and rectum may also be present. For these cases the *treatment* consists in extension and counter-extension; pressure on the elevated crest of the ilium; a broad belt with appropriate pads around the pelvis, and extension maintained either by Buck's, Hamilton's, or Hodgen's extension apparatus, or perhaps by the anterior splint of Nathan R. Smith.

Dislocations at the junction of the pelvic bones in the acetabulum, may be considered under the head of fractures of those bones.

FRACTURES OF THE OS INNOMINATUM.

Fractures of the pelvis are generally occasioned by great violence. Indeed, when we consider the formation and position of the bones composing this portion of the human skeleton, it would seem that nothing but great force could cause a solution in their continuity; yet in my researches upon this subject, I find a case recorded by Cappelletti, in which the ascending branch of the ischium and descending branch of the pubis were broken by muscular contraction. The patient, 54 years old, had jumped from a carriage, the horses having run away, with one leg in the greatest possible degree of abduction. This case I find recorded in *Ranking's Half-Yearly Abstract of the Medical Sciences*, for 1848, p. 83.

Mr. Handcock, in the *Lancet*, for May 23d, 1846, reports a most interesting case of fracture of the *descending ramus of the pubis*. The patient fell from a height of about fourteen feet, and presented the usual symptoms of shock; the following symptoms then resulted, which will give a fair *résumé* of what may be found in such cases: "On the tenth day, the patient got out of bed for the first time since the accident, and endeavored to dress himself; but although entirely free from pain in the buttock, he was unable to raise his left foot from the ground; and in attempting to do so, he said he felt something move in the perinæum. Crepitus was felt, close to, but rather higher than

the junction of the ramus of the ischium and pubis on the left side. The shape and position of the limb were natural. There was exact correspondence of the length of the limb with its fellow; the limb resting on the bed in a straight position, could *not* be raised beyond about an inch, and then only with great pain, neither could it be abducted beyond a certain distance (23 inches measured from heel to heel). When the patient lay straight in his bed, he could bend his knee, and afterward approximate the thigh to his body, the foot being in this way entirely raised from the bed. He could also perform adduction, and as the limb passed the mesian line so was the power of raising the straightened limb increased, and performed with diminished pain. He could not assume the sitting posture without supporting himself with his hands. For ten days, the patient always referred his suffering to the left nates and the lower parts of his back, and never to the seat of fracture, but this may be explained by the bruising of his buttock having been so severe." There was not the slightest injury to the urethra and bladder. Mr. Handcock states, that in examining a patient for this accident, the limb should be abducted to put the adductor and gracilis muscles upon the stretch, and the thigh afterward rotated upon its axis; as when rotation and circumduction were employed, whilst the limb was adducted no crepitus was felt, but after previous abduction, crepitus was distinctly evident.

This remarkable case, which presents many symptoms to be remembered, recovered without a single untoward symptom; the complete use of the extremity being regained. As has been before stated with regard to dislocation of the pelvis, fractures are not necessarily fatal; the danger being as a rule in proportion as the viscera are implicated.

Hamilton reports several cases of comminuted fracture of the pelvis, which it is unnecessary to quote here, as the work is accessible to all. He is of opinion that there is not much displacement, and if any occur, it is in the upper fragment, which is carried slightly inward, although he admits that occasionally it is displaced upward, outward, or downward. He also quotes, from the *New York Journal of Medicine*, a case reported by Leute, in which a dislocation and fracture of the alæ of the

pelvis on the same side were recognized; the patient died, and "the autopsy disclosed what had not been suspected during life, viz., that the left ilium was broken horizontally about its middle, and vertically through the crest, and also that there was a fracture extending through the sacro-iliac synchondrosis, accompanied with considerable comminution of the articular surfaces. It was also found that a portion of the small intestine was ruptured, and probably by one of the sharp fragments of the broken pelvis."

The *anterior superior spinous process of the ilium* is also sometimes broken. The fragments are generally displaced downwards, and motion and crepitus are distinct. In such cases the patient must be laid upon the back, and the limbs drawn upward to relax the muscles attached to the process, and a bandage applied. The latter, however, is not absolutely necessary, as cases are recorded wherein a good result was obtained by keeping the patient in the position alluded to.

Sir Astley Cooper—*vide* Cooper and Travers's *Surgical Essays*, Philada., 1821, p. 39—says: "I have known three instances of fracture of the os innominatum recover; two of these were fractures of the ilium, and the nature of the accidents was easily detected by the crepitus, which was perceived upon moving the crests of the ilium; the third was a fracture of the junction of the ramus of the ischium and pubis. In the two first a circular roller was applied upon the pelvis, and the patient freely bled; but in the latter no bandage was employed." Mr. Sandford* gives the details of a fracture passing through the body of the pubis on the left side, and through the ramus of the left ischium. The patient was aged thirty years, and the accident had been produced by her body being pressed by the wheel of a cart against a lamp-post. This case is too lengthy to quote in this place. The symptoms were crepitus and mobility, easily recognized by placing the patient on her face, one hand on the back of the right ilium, and the other on the pubis of the same side; posterior spine of the ilium projected upward; a vaginal examination revealed the pubis passing inward into the cavity of the pelvis;

* Cooper and Travers's Surgical Essays, p. 37.

there was also some extravasation of blood; vomiting; cold feet; severe pain; great thirst; pulse 90 and small; the right leg was shorter than the left, with numbness on that side. She lived about three weeks, the autopsy revealing what I have already stated. In such cases the extension treatment is the appropriate one, and it appears to me that a most excellent apparatus would be the wire-gauze splint of Hamilton, applied with appropriate pads, with an additional band in front.

It very often happens, as will be seen from the cases mentioned, that fractures of the pelvis are comminuted; the pubis and ischium may be fractured; a distinct portion of bone may be severed; these, if they do not unite, must be exsected.

FRACTURES OF THE ACETABULUM.

This injury is more difficult to diagnose than any other affecting the pelvis. In this remark I should exclude perhaps the breaking off of the rim or lip of the cotyloid cavity, which often happens in the ordinary dislocations of the femur, more especially that on the dorsum ilii. In such cases crepitus is present when the reduction is being effected, and there is a great tendency for the head of the bone to slip from its socket when the extending force is withdrawn. In such cases permanent extension and a circular pelvic bandage generally suffice.

The difficulty in obtaining a correct diagnosis when fracture of the acetabulum takes place, is very great, because the symptoms may simulate closely those belonging to dislocation or fracture of the neck of the femur; and although Mr. Travers asserts—*vide* Holmes's *System of Surgery*, vol. xi, p. 713—that "very acute pain produced by pressure upon the projecting space of the os pubis, and the inability of the patient to maintain the erect posture immediately after the infliction of a blow or fall which produces the mischief," diagnosticate fissures or cracks in the acetabulum, yet there are some other symptoms that must be considered when the fractures are more extensive, especially when by sheer force the head of the femur has been driven through the cotyloid cavity.

It is well known that there is a junction of the ilium, ischium,

and pubis within the acetabulum, and cases are recorded by Earle, and Cooper and Travers, where the bones separated at their anatomical junction. When, however, the thigh-bone is driven through the acetabulum, then the symptoms are very liable to be confounded with fracture of the cervix femoris, as well as dislocation of the thigh-bone. Mr. Earle, in the nineteenth volume of the *Medico-Chirurgical Transactions*, gives four cases which closely simulated fracture, there being eversion of the foot, and loss of prominence of the trochanter, the diagnosis being chiefly made out by the fact that the limb could be drawn outward to a considerable degree without suffering, which cannot be effected if the bone is broken without much pain.

Another case, however, is recorded in the *Cyclopædia of Anatomy and Physiology*, in which the limb was two inches shorter than the left.

Sir Astley Cooper, in the essays already quoted, p. 36, relates the case that "was admitted in St. Thomas's Hospital having the appearance of the dislocation backward. The patient lived four days. On examination the fracture was found passing through the acetabulum, dividing the bone into three parts, and the head of the thigh-bone was deeply sunken into the cavity of the pelvis."

Mr. William M. Tyer gives three cases of a similar injury, two of which were mistaken for fracture of the neck of the femur, and the third for a dislocation. It is a curious fact that, in the majority of the cases of this variety of fracture, the cervix femoris has been found entire, although I found the record of one case, by Dr. George W. Gibb (*Ranking's Abstract*, 1849), in which not only was the acetabulum extensively fractured, but there was an intracapsular fracture of the neck of the femur. He also gives another most interesting case of comminuted fracture of the pelvis, from which he draws such pertinent deductions that I quote them entire. He says of his case:

"1st. There were the symptoms of fracture of the cervix femoris, when that lesion was not present, as eversion of the foot, shortening, crepitus, etc., and great nicety was required in forming a correct diagnosis.

"2d. The shortened member could not be drawn down to an equal length with its fellow of the opposite side, neither could

it be inverted, and motion in almost any direction gave great pain.

"3d. None of the pelvic viscera were injured, although the catheter had occasionally to be used, and blood was passed at stool.

"4th. The fracture had become perfectly united, and the patient was on the eve of discharge, when another cause produced death.

"5th. The sequence showing the union of the bones bent in an irregular manner, the formation of a ligamentous acetabulum, with the wise provision of nature in the total absence of any new deposit within the articulation which might have interfered with the function of the joint."

From what I have already written, and as has already been mentioned, from a careful inquiry and research, it has been found that the neck of the thigh-bone is rarely fractured in these injuries; that in the majority of instances, if the limb is turned outward, the trochanter having lost its prominence, with shortening, and severe pain when moving the limb in any direction, then we may be tolerably sure of fracture of the acetabulum. If the foot is inverted, and the head of the femur cannot be discovered in either of the positions it is known to assume in the various forms of dislocation, the fact must be remembered, that often the posterior lip of the acetabulum is broken, and the femur *may* be dislocated. The presence, however, of the head of the bone on the dorsum will readily diagnosticate the luxation.

From the record of these cases, it appears that the treatment in most cases of fracture of the innominata, consists if possible in reduction of the bones by proper manipulation, for which no especial rules can be laid down, each case being left to the judgment of the surgeon, and proper extension applied. Even the latter is not always necessary, as good recoveries have been made by perfect rest and the body bandage.

It is a question in my own mind, whether the median section of the perineum would not be a proper step to pursue in cases of rupture of the bladder, when the surgeon is called shortly after the accident, and such measures have lately been resorted to with good results in perforation of that viscus by disease.

III.

FRACTURES OF THE LEG.

By J. H. McClelland, M.D., Pittsburg, Pa.

In order to present as full a consideration of this important division of the subject of fractures as may be, I propose calling attention to the general subject to some extent, but with special reference to fractures of the leg. Upon inquiry I am not aware that any of my colleagues have gone over this ground in the preparation of their papers.

The following order will be observed: Etiology, Varieties, Semeiology, Diagnosis, Prognosis, Repair, Treatment, Ununited Fractures, Deformities.

ETIOLOGY.

Fractures of the leg result from a variety of causes, and are rare in infancy, childhood, and old age. The causes have been divided into predisposing and exciting.

Predisposition.—Men are more liable to fractures than women, owing to their more vigorous pursuits, and their consequent greater exposure to accidents of all kinds. This is especially true of fractures of the leg. The influence of sex on fractures, though true in general, is somewhat modified by differences in the periods of life.

During infancy and childhood the proportionate number of fractures of the leg is greater among female children, doubtless owing to their slower development, which renders their skeletons less solid at those ages than those of the males. At a later period

the males are more subject to fracture, owing to the differences in the education of the sexes. Still later, as we have before stated, the males present a larger number of fractures than the females, owing to the differences in their occupation, rather than to any predisposition of sex; and, finally, among the aged, the females are again more liable to fractures, owing to the ravages of time, which exert more influence in the degeneration of their osseous tissue.

As to the influence of seasons, some surgical writers have observed that fractures are more frequent in winter than in summer, and some have affirmed that the bones themselves are more brittle, and the muscles more rigid during cold weather. We may conclude that among children the fractures are more common in summer than in winter, in adults the proportion between the two seasons is equal, while with the aged the proportion is greater during the winter months. Falls are undoubtedly more frequent in winter than in summer, owing to the slippery condition of the walks, yet these falls are generally slight, and unless the bones are weakened by age or disease, fractures are not apt to result therefrom. On the other hand, during mild weather, outdoor work is prosecuted with greater vigor, and falls from buildings and accidents from similar causes are much more common, and more frequently result in fractures.

Fractures occur during all periods of life, from intra-uterine to extreme old age, but with varying frequency. During infancy and childhood, the bones, being more flexible, escape fracture more frequently, while in advanced life they are broken with greater readiness.

In some twenty-three hundred cases of fractures treated by Malgaigne, at the Hôtel-Dieu, it was observed that the fractures occurred most frequently between the ages of twenty-five and sixty, and becoming more rare above and below these limits, as we depart from them.

The real influence of age cannot be determined by reference to the data presented by a number of fractures whose results have thus been compiled. These results must be modified by the proportion of the number of fractures to the population; and to further define the real influence of age, reference must be made

to the occupations of those who present the fractures. Malgaigne has in his tables thus compared the number of fractures occurring during the various periods of life, with the population, and has obtained the following results. During the ages between five and fifteen belong nearly one-fifth of the entire population, while this furnished hardly more than one twenty-third of the fractures. At the age of fifteen the predisposition suddenly increases; it remains almost the same up to twenty-five years, receiving then a new increase quite as sudden as the first; after that it takes but gradual steps up to sixty years; so that the two periods, for instance, from twenty-five to thirty years, and from fifty-five to sixty years, giving a nearly equal number of fractures; the latter period is under a predisposition nearly double that of the former, since as many fractures occur in a population less by almost one-half. Beyond sixty years there appears quite an unexpected result; the number of fractures suddenly diminishes in the same ratio as that of the population, so that the predisposition, which till then has been constantly increasing, remains afterwards almost stationary; a given number of old men, as from seventy to eighty years of age, for example, affording a proportion of fractures not sensibly greater than an equal number between fifty-five and sixty. Above eighty years the greater rarity of fractures is manifest.

Referring now to the influence of occupation on this enumeration, we find that the frequency of fractures at certain periods of life are due more to the pursuits of life than to any great change in the osseous tissue. Thus infants from two to four years of age, wanting in steadiness of gait, are liable to frequent falls, the effect of which is severe upon their incompletely ossified bones. After the fourth year the bones have become stronger, but the causes just mentioned are replaced by others, as running, climbing, and scuffling. At puberty are added to these the learning of trades, and from twenty-five to forty years, the fully developed muscular power, and the increased exposure to accidents. After forty years comes the degeneration of the skeleton; and the want of increase of the number from fifty-five to eighty years is due to the withdrawal from active pursuits, because of the debility of age, thus lessening the exciting causes.

From these statements it may be seen that the fragility of the bones acts only in infancy and old age, and that the external or exciting causes are pre-eminently greater.

The fragile conditions of the bones late in life are dependent either upon an affection of the osseous tissue, whereby the walls of the diaphyses are thinned and the canals enlarged, or to an absorption in the cancellated portions, and the consequent increase of their spongy nature.

An attempt has been made by some writers to show that the more superficially situated the bones were, the greater the liability to fracture, but carefully prepared data have failed to demonstrate the fact. The tibia is more frequently fractured than any other bone of the body, and this is doubtless partly due to its superficial situation. In relative frequency the femur follows closely upon the tibia, and it is the least exposed of any of the bones. Among the rarest of fractures are those of the acromion, olecranon, calcaneum, and sternum, which are situated immediately beneath the skin. Again we find that the long bones are most often the seat of fracture. The relative position of the bones is also a predisposing cause of fracture, the radius being more frequently fractured than the ulna, the fibula than the tibia. Again we find that the tibia and radius, which in falls upon the feet and hands, sustain nearly the whole of the body, exceed all other bones in the frequency of their fracture.

All diseases dependent upon some cachexia, as scrofula, gout, mollities ossium, fragilitas ossium, mercurialization, and rachitis, are more or less active agents in predisposing to fracture. Inflammation of the periosteum, or of the bones themselves, also predispose to fracture.

Exciting Causes.—The immediate determining, or exciting causes of fracture of the leg are of two kinds: external violence and muscular contraction.

Fractures by mechanical or external violence are by far the most common; and this violence may operate in two ways: by causing the fracture to take place at the point at which the force is applied, producing what is termed a "direct" fracture; or by causing a separation of the bones at some distant point from that

of the application of the violence, producing an "indirect" fracture, or one by *contrecoup*.

It is often difficult to determine, however, whether the fracture has been caused by direct or indirect force. Generally blows break the bone at the point struck, and falls act by counter-stroke, yet there are a great many exceptional cases, and the external causes of fracture cannot be classed, except by their order of frequency. In such a classification, fractures of the leg are oftener produced by direct force, then follow falls, powerful pressure, torsion, bending or pulling, and some rarer causes in the order given.

The effects of falls are in every way most various, and bear no relation to the height, manner of falling, or force of the fall, and the injuries sustained. While falls are more often productive of indirect fractures, yet many direct fractures are sustained from this cause. More commonly, however, the point struck remains sound, and the break takes place at some other point more or less distant. Fractures of the leg from this cause generally take place at the lower fourth, and generally nearer the ankle.

Blows or rude shocks usually cause direct fractures; some blows, however, either by the obliquity of their direction or the peculiar shape of the bone, cause indirect fractures.

Pressure acts in the same way, directly or indirectly, but more slowly; under this head belong those bending forces, which are applied to bones in their continuity, and increase or lessen their natural curvature.

Torsion may be considered an indirect cause, as it acts upon the whole extent of the bone, and breaks it at its weakest point. It is the sole cause of many fractures at the lower third of the fibula.

Fractures due to violent traction may be either direct or indirect, as when the limb is drawn in by machinery, or indirect, when the internal malleolus is torn off by the eversion of the foot, or the fibula is broken by the inversion.

The influence of muscular contraction is rarely sufficient to produce fracture of the leg, although cases are reported. When fractures do occur from muscular contraction, there will generally

be found an abnormal increase of muscular power, or a degeneracy of the bone tissue.

The influence of cold weather as a predisposing cause would seem quite marked in fractures of the leg, as they appear to be more common in winter than in summer.

Among the direct causes of fracture of the leg, the most common appears to be a simple fall upon the pavement, from a false step, or slipping upon the icy walk; falls from an erect position, as in running and wrestling, are quite frequently the cause of many fractures of the leg, as well as falls from heights, when the patient alights directly upon the bottom of the foot. The direct causes are somewhat more frequent than the indirect; owing to the superficial situation of the tibia, it is more liable to injury from direct violence than most of the other bones. The kick of a horse or a heavily booted man will readily cause a separation of the bone. Blows of all descriptions, the passage of wheeled vehicles over the limb, heavy bodies, such as beams, stones, masses of earth, and building materials generally, falling from various heights upon the limb, have a disastrous effect upon its continuity.

Malgaigne, in his *Treatise on Fractures* (p. 631), says of the effects of these causes upon the seat of fractures, that in some thirty-five cases treated by him, eighteen were in the middle portion of the leg; two only were higher up, near the knee; six at or about the lower third; eight somewhat lower down, an inch or two above the malleoli; and one was double, affecting the upper as well as the lower third. Malgaigne inclines to the opinion, that a large proportion of fractures at about the middle of the leg were produced by counter-stroke, and seated at a different point from which the blow fell. In his thirty cases of indirect fracture a different seat was chosen; twenty-one occurring at the lower fourth of the tibia, more or less close to the malleoli; in three, in the lower third; and in six at its middle.

According to these figures, fractures at the upper third, which are very nearly the rarest of all, would be due solely to direct violence; those at the middle, of much more frequent occurrence, would find their principal causes in blows or great pressure; and lastly, those in the lower third, the most common of all, should

be ascribed more especially to indirect violence. There is thus a remarkable analogy between fractures of the lower extremity of the leg from falls on the feet, and those of the lower extremity of the radius from falls upon the hand.

Hamilton, in his *Fractures and Dislocations* (p. 461), says, that in an analysis of one hundred and eleven cases of fractures of the tibia and fibula, the bones were broken in the upper third but four times from a direct cause, and once from an indirect cause. In the middle third, forty have been referred to a direct cause, and two to an indirect; and in the lower third, thirty-nine to a direct cause, and eighteen to an indirect. In this, Hamilton's observations do not agree with those of Malgaigne; the former found that direct causes produced a large majority of the fractures at the lower third, but the proportion was smaller than in the middle third.

VARIETIES.

In describing the varieties of fracture, I adopt the terms simple and single, believing that both are necessary to a correct description of what are different forms of fracture.

To show the confusion in terms, I will offer the following quotations:

Billroth (p. 167) remarks: "I say simple or subcutaneous fractures, in contradistinction to those accompanied by wounds of the soft parts."

Malgaigne uses the term "simple" to describe a single fracture, which may be compound or complete.

Hamilton says that "a simple fracture is one in which the bone is broken only at one point; the term has no reference to the question of complications; but in its technical meaning, as employed by both English and American surgeons, it has reference only to the number of fragments into which the bone is broken. It would be more correct perhaps to substitute the word 'single' for 'simple.'"

If I understand Malgaigne or his translator, he does not use the word single for simple, but uses the word simple to designate a fracture at one point which may be compound or not.

Gross (p. 851) describes a simple fracture as follows: "A

fracture is said to be *simple* when it is unaccompanied by any wound of the soft parts directly over the ends of the fragments, thus exposing them to view, or at all events permitting them to be felt."

Of course, according to this view, a *simple* fracture is not necessarily single.

Helmuth (p. 625), unites, "simple fracture, the bone being broken at one point."

Franklin (p. 351) says, it is said to be *simple* when unaccompanied by any lesion of the soft parts.

Holmes (vol. ii, p. 38) unites the terms, and describes simple single fractures as distinct from compound.

From this it will be seen how wide a difference obtains in regard to the definition of these terms. I therefore take the ground that both *simple* and *single* should be employed in describing the varieties of fracture; and that the ordinary meaning of the terms be accepted. I would then describe varieties of fracture as follows:

A *simple* fracture, as its name would indicate, should describe the simplest form of fracture, wherein the bone is broken at one point, and unaccompanied by any injury of the soft parts in the immediate vicinity. It may be complete or incomplete.

A *single* fracture is one in which the bone is broken at one point, but it may be also compound, complicated, complete, or incomplete.

A *compound* fracture is one in which there exists also an external wound leading to the seat of fracture. It may be single, comminuted, complicated, impacted, complete, or incomplete.

Comminuted fracture is one where the bone is broken into a number of pieces. It might be termed a multiple fracture. It may be also compound, complicated, or impacted. The last two varieties of fracture are more frequent in the leg than in any part of the body.

Complicated fracture is one which is associated with dislocation, injury of vessels, nerves, or other soft parts. It may be single, compound, comminuted, impacted, complete or incomplete.

The complete fracture may include any of the varieties. The incomplete may be any except the comminuted or impacted.

Under the heads of complete and incomplete fractures, it may be well to notice some varieties of each.

By *complete* fractures we mean those in which the solution of the continuity of the osseous tissue is entire; and under this head four varieties are presented for discussion, viz., transverse, serrated, oblique, and separation of epiphyses.

The transverse variety, in which the bone is broken directly through on a level, very seldom occurs in fractures of the tibia.

In the cases of fracture of the tibia from muscular action, which have been reported, all of them are nearly transverse.

The *serrated* fracture, when the ends of the bones present tooth-like processes of bone which fit into each other, occurs much more frequently than the transverse.

The *oblique*, however, is much the most common variety, and is oftener produced by indirect violence, as the falls from a height upon the feet. The obliquity of the line of fracture varies from an angle of 45° to nearly parallel to the axis of the bone, the latter constituting the longitudinal fracture.

Lastly, in relation to the separation of the epiphysis, which may be justly placed in this connection, it is often difficult to diagnose fracture through the point of union of the diaphysis and the epiphysis, and a mere separation. The absence of crepitus, which is seldom present in these fractures, particularly in those of the upper end of the tibia, renders the diagnosis difficult.

By *incomplete* fractures we mean those which involve only a portion of the thickness of the bone.

The varieties presented for consideration are the *fissured*, and the *incomplete* properly so called.

The *fissured* variety is very common in the flat bones, but is seldom met with in the bones of the leg; its existence in the long bones has been denied by some writers, but there is no doubt but that they occur, and generally result from the application of the breaking force over a small space of the bone.

The *incomplete* or "*hickory*" fracture is common in young children, and occurs more frequently in the radius and ulna than in the tibia and fibula, though occurring as frequently in the leg as in the thigh. In the femur the causes producing this fracture are generally direct, either from blows or from strong pressure.

SEMEIOLOGY.

The symptoms presented by the fractures described are numerous and varied. Their appearance is generally in the following order, to wit: cracking or snapping of the bone, which is heard by the patient at the time of the accident, pain, loss of power in the limb, contusion of soft parts, swelling, deformity, either immediate or subsequent, from displacement of the fragments, preternatural mobility, and lastly crepitation.

Of the above we will notice only the three important symptoms, preternatural mobility, deformity, and crepitation.

Preternatural Mobility.—This symptom is characteristic and pathognomonic of fractures, but it cannot always be recognized, and in fact is not always present. In impacted fractures it must necessarily be absent. In incomplete fractures it can only be recognized by particular motions of the limb; also when the fragments are small, as in fracture through the malleoli, the superior diaphysis of the tibia or fibula, and, when only one of these bones are fractured, the sound one preventing movement, it is very difficult to detect the mobility.

Deformity.—Fractures of the leg are subject to all the varieties of displacement, and although the deformity is not invariably present, it is in general one of the most prominent symptoms of fracture.

The deformity varies in form and degree according to the displacement.

Shortening is at once a deformity and a cause of diminution or loss of power in the limb. The shortening of the limb where it exists at all, varies at first from a line or two to a half or three-quarters of an inch. Generally it is about half an inch.

If the fibula alone is broken the tibia acts as a splint, and retains the fragments in position, so that the chief signs will be eversion of the foot, with a depression at the site of injury. When the tibia and fibula both suffer fracture, unless the fracture is sustained immediately at the ankle-joint or within three inches of it, they rarely break on the same level, and the fibula is more frequently fractured at its upper extremity than the tibia.

The shortening in cases of fracture of both bones of the leg is

generally well marked; in the majority of cases the shortening is from one and a half to three inches. There is also deformity of the diameter of the leg from the overlapping of the fragments, which in some cases is extraordinary.

The angular displacement is generally forwards, and is kept up by the contraction of the muscles of the calf.

In transverse fractures the displacement is very slight, the greater displacement presenting in oblique fractures; dislocation of the ankle, more or less complete, often accompanying the fracture of one or both bones of the leg.

Crepitation.—Crepitus, or the sound which is produced by the friction of the fractured ends of the bones, or the peculiar sensation thus felt, although a pathognomonic symptom of fracture, is not always present. If, as in serrated fractures of the leg, the bones are held in position, their rubbing is thus hindered, and crepitation hard to discern, or if the surfaces are separated, as may be the case with the fibula, and in some fractures of the tibia also, crepitation will be wanting. A portion of the muscles or a clot of blood may intervene between the fragments, and thus the crepitus be destroyed. In simple fractures one fragment should be fixed and the other rotated upon it, or both ends grasped and moved upon each other, before satisfactory crepitus will be obtained.

In splintered and comminuted fractures, the least movement or pressure upon the part will almost always cause clear and distinct crepitus.

The surgeon must always guard against the similar sound known as "false crepitus," which is dependent upon the presence of air in the bruised tissue, the rubbing of tendons in a congested sheath, or the click of a stiffened joint. True crepitus, however, reveals itself to the hand rather than to the ear, and the sensation once felt is easily recognized.

DIAGNOSIS.

The diagnosis in fractures of both bones of the leg is rarely obscure or uncertain. The general symptoms of fracture, viz., contusion, swelling, pain, deformity, crepitation, etc., are here present in a marked degree. There is always more or less dis-

placement in complete fractures, which renders the case easy of diagnosis. Where the fracture is oblique, the lower end of the upper fragment can be seen or felt, unless the swelling has become very great; in which case the existence of the fracture can only be determined by the crepitation, deformity, shortening, and mobility.

The compound and comminuted fractures, which occur more frequently in the leg than in the other bones of the body, are diagnosed without trouble.

Fractures of the tibia alone are more difficult of diagnosis than those of both bones; the fibula remaining in its integrity acts as a splint to the broken bone, thus preventing much displacement.

It is seldom, however, that the fragments are retained in apposition, and the passage of the finger along the spine of the tibia will reveal some separation. Crepitus will generally be absent, or very faint and unsatisfactory. The preternatural mobility may often be detected by the rotation of the fragments upon each other.

Fractures of the malleoli are met with in various forms, and are always accompanied with more or less displacement of the ankle. The foot is almost always turned upwards and inwards, as if partialy luxated, in the fracture of the internal malleolus, and the detached piece of bone is freely movable under the skin.

In the fracture of the fibula alone, the tibia acts as a powerful splint in retaining it in position, and there is more or less displacement of the ankle; but few symptoms are presented; the inferior fragment is generally drawn towards the tibia, and the fragments thus separated, so that crepitus is lost. Feeling along the line of the fibula, a depression over the seat of the fracture may be felt.

PROGNOSIS.

Fractures of the lower extremities are, generally speaking, more serious in their nature than those of the upper, being accompanied with more danger to life and limb, and more troublesome in their treatment. In simple fractures of the leg the prognosis is most favorable; and although the time when perfect union takes places is not always readily determined, yet the bone

is frequently sufficiently firm for use in thirty days; shortening is slight, if at all, and deformity rarely exists.

The comminution of the bone and laceration of the surrounding tissue render the injury more serious, and here the prognosis depends much upon the treatment which is adopted.

In oblique fractures, unless great care is taken, there will remain a persistent prominence of the upper fragment.

In a majority of cases of fractures of the fibula, union has taken place with the fragments inclined to or resting upon the tibia.

In general, when there is but slight or no displacement, the prognosis is very favorable.

In compound and comminuted fractures of both bones, complications, such as inflammation, suppuration, erysipelas, and necrosis, are liable to intervene, and with the best of treatment, some cases of these complicated fractures will result in non-union or deformity.

Fractures of the shaft of either bone will unite promptly and without deformity; when they are broken in close proximity to the joints, the involvement of the joints is very apt to cause more or less stiffening of them, although the anchylosis will in many cases not be permanent.

Compound fractures of the leg from direct violence will frequently require amputation.

REPAIR.

The process by which broken bones are repaired is not only interesting in the extreme, but a clear understanding of the manner of union is of the greatest practical value.

Unfortunately, there are questions involved in this connection that have as yet reached no satisfactory solution.

This process is interesting, in that it displays the wonderful facility with which nature restores a structure so hard and unyielding, and the completeness of the restoration in every respect. It is not unusual to find unsightly evidence of destructive processes in the skin, which would at first appear thoroughly adapted to perfect restoration; but in bone, under favorable cir-

cumstances, all traces of deforming injury are effaced, and the function of the part most perfectly restored.

A comprehensive knowledge of the mode of repair is also essential to an intelligent and successful treatment of fractures themselves, and is none the less necessary to a proper adaptation of means and measures for the correction of deformities following fractures.

I will, therefore, briefly refer to the theory of repair advocated by many standard authorities, and until recently generally accepted, with some reasons for modifying the same, lately advanced.

The evolution of our present knowledge of bone repair has been somewhat after the following order:

The indefinite idea of the ancients, that bone was glued together, after fracture, by a substance which they called osseous juice, gave place finally (about 1740) to the theory of Duhamel, based upon experiments on animals and the bark of trees, the latter of which he compared to the periosteum.

Duhamel, from these experiments, concluded that bone was repaired in the following manner, briefly: (1), that repair was due to the action of the periosteum and endosteum, which became thickened; (2), transformed into cartilage (3), and then into bone; thus forming an internal and external band of support. He did not think direct union could occur except in very young subjects; generally there was an intermediate substance.

Haller pursued a series of experiments, by which he proved that the periosteum was not an efficient agent in this process; but finds that it occurs in the following order and manner: (1) The effusion of a jelly-like substance, which is changed (2) into a cartilage, (3) then into spongy bone, and, finally, (4) into compact tissue. He thus differs from the preceding in excluding the periosteum as a participant in the process. He admits the occasional occurrence of direct union.

Without mentioning a number of experimenters who followed, and whose conclusions varied from the preceding largely, we come to the time and tenets of Dupuytren, as next in our order of development.

His experiments, also on lower animals (which should be

remembered), led him to the doctrine of two distinct callus formations, known as the provisional or temporary, and the definitive or permanent. As the latter grows stronger (in eight to twelve months), the former is absorbed.

It will be seen by the following that Dupuytren adds a *fifth* period to the preceding, in which the definitive callus is produced.

1st. In eight to ten days the soft parts become engorged, pour out lymph, which surrounds the ends of the bone. The extravasated blood is absorbed as not being required.

2d. From the tenth to the twentieth day absorption goes on, and the soft parts are relieved of much of the infiltration which has taken place. This leaves a fibro-cartilaginous mass or tumor around and between the ends of the bone, binding them somewhat, but still permitting a degree of motion.

3d. Between the twentieth and fiftieth days the process of ossification goes on, the callus forming a firm bony clasp. At this time, however, although the patient may use the leg, if this callus be divided, the ends of bone will still be free to move upon each other, the definitive callus existing between the ends being yet but soft.

4th. Extending from fiftieth day to fifth month is the period when the definitive callus is taking on the form of true bone, and the callus is more compact, although diminishing.

5th. Extends from the fifth to the twelfth month. During this period, the provisional callus having served its purpose, is absorbed, the definitive has assumed all the characteristics of true-bone, the soft parts are normal, and the repair is complete.

Dupuytren and his followers further aver, that when the fragments are not brought in correct apposition, so as to permit of the formation of definitive callus, that the provisional callus then continues in existence, and performs the function of holding the bone intact.

Bilroth, in his *Surgical Pathology*, substantially adopts the above, believing callus to be an ossification of *cartilage*, the portion between the fragments becoming compact tissue, and remaining while the rest is absorbed. He describes this repair as a "sealing-wax union," that is, as if the fragments were thrust into

heated sealing-wax, which cooled and held them in a sort of union until the compact tissue was formed. These views are also sustained by Virchow, Rindfleisch, and others.

Dr. Norris, of Philadelphia, also gives the following indorsement (*Contributions to Practical Surgery*, page 18): By this theory phenomena may be explained which are sometimes observed after fractures; the renewal of the deformity after the removal of splints, at the end of a period that experience shows generally to be sufficient for a cure; the possibility of remedying by a proper and well-directed treatment, and why this possibility exists only during a certain time, and then ceases, are readily explained by it. They are fruitful, too, in practical hints relative to the precautions that should be taken during the convalescence of fractures, particularly when oblique, as well as in regard to the length of time that, in certain cases, it is necessary to prolong the application of an apparatus, and point out the probability of rupturing advantageously within a certain period the callus of badly set bones.

As further on in this line of development, Malgaigne (*On Fractures*) modifies the above, and especially in regard to the supposed cartilage period, which he admits may possibly be present if the subject be very young.

He says the callus is formed from an exudation of lymph, which becomes a reddish tissue, and finally spongy bone. In the spongy portions of bone it always remains so; in compact portions it may occasionally become compact also. In the spongy portions of bone (the epiphyses) he believes the union is always immediate, but in the diaphyses intermediate. This bond of union usually forms a ferrule at the seat of fracture, at times not, but when once formed it remains.

The most marked departure is now made by Paget, although Hamilton shares the honor with him.

Paget differs most materially from the earlier investigators with regard to the provisional or "insheathing" callus. He explains that their conclusions were arrived at from experiments on lower animals, and that the insheathing callus only became necessary because the restlessness of animals prevented quietude of the fragments, and hence nature found this callus necessary to

union at all. The normal mode of union in human bone is by an intermediate callus, not insheathing.

Mr. Paget (page 182) offers the following points of difference with the theories just set forth:

"1st. That the reparative material is placed between the fragments, and not around them; 2d. That, when ossified, it is not a provisional, but a permanent bond of union for them; 3d. That the part of it which is external to the wall of the bone is not exclusively, or even as if with preference, placed between the bone and the periosteum; but rather in the tissue of the periosteum, or indifferently either in it, beneath it, or external to it. When the bone is placed in close apposition or in correspondence they may, I believe, be joined by immediate union."

I venture, in conclusion, the following remarks:

The theories of the last-mentioned observers are doubtless entitled to general acceptance, that the normal mode of repair in the human subject is by intermediate and not insheathing callus. But while this is true, I am much inclined to the belief that practically there does many times exist an insheathing callus, which partakes more or less of the character of provisional callus. My observation has been that there are very few cases in hospital or private practice (in my own limited experience) that do not exhibit considerable callus formation, and that these formations in the course of time diminish materially in size. This gives evidence of a callus which in a measure is temporary. I am willing to admit that many of these cases may not have been in exact coaptation, and that perfect immobility had not been secured; nevertheless, a fair majority made excellent recoveries, without shortening or subsequent deformity. The statement that a division of this hardened callus (in animals) showed that the ends of the bone were still ununited (sealing-wax union), and that definitive callus subsequently formed in such cases, would be evidence to my mind that this callus was an abnormal product caused by the irritation of the rubbing fragments, and, that had perfect immobility been secured, such callus would not have existed. In regard to the manner of union, I believe it to be a proliferation of true bone-cells, thrown out from the ends of the bone into a suitable receptive material, which is not cartilage.

Histological research has proven that cartilage, or any other substance, does not ossify, correctly speaking, but that the cartilage merely gives place to bone-cells, which increase by proliferation. This deposition of reparative material, as shown by Paget, does not come from the periosteum, at least not alone, but is effused in it and all around it.

All of the deductions of Norris, in reference to changes in the callus and bones imperfectly united, will apply just as properly and with as much force to the theory of intermediate callus.

TREATMENT.

Fractures of the leg require special attention, because—1. Of their frequent occurrence; 2. The difficulty often attending their treatment; and 3. The important uses and relations of the parts involved.

For these reasons I regret the lack of both time and ability to give the subject full consideration, and am compelled to confine myself to the mention of a few well-tried methods, and mainly such as have been put in practice by myself and colleagues during seven years' service in the Pittsburg Homœopathic Hospital and elsewhere.

In the reduction of these fractures, which should be at the earliest possible moment, it is manifestly proper to use the greatest gentleness and care.

No wrenching or spasmodic pulling is allowable; on the contrary, steady traction and gentle manipulation, thus accomplishing the desired object with less suffering and better results; there will be less liability to spasm of the muscles, and the soft parts are saved laceration.

By extension and counter-extension in this manner, the fragments are disengaged from the soft parts, at the same time the fragments may be manipulated carefully into correct apposition.

In transverse fractures this is readily accomplished, and thus maintained; but in oblique fractures there is more difficulty, and the retention of the fragments correspondingly great. The means of retention in these cases are most various, and a vast amount of talent has been expended, from times very ancient, in devising and constructing suitable apparatus.

That this expenditure has not been all in vain is clear, and yet the usefulness and adaptability of a given measure or means are nearly always in proportion to its simplicity.

It is my intention to refer to the use of the starch and plaster of Paris bandages, certain forms of splints, adhesive strips, and the fracture-box.

Starch Bandage.

The use of this or similarly constructed bandage is very ancient indeed, and yet its merits and extensive range of applicability are not always recognized.

I have been in the habit of using the starch bandage for simple or even comminuted fractures of the tibia and fibula, or both, located in almost any portion of their extent, and with most excellent results. In many cases the patients are permitted to move about on crutches after the first few days.

This bandage may be applied at once when there is no swelling, otherwise when the swelling has subsided.

The bandage may be constructed in the following manner:

Flour-starch is prepared of the consistency of thin paste. Pieces of binder's-board are then cut out, soaked in warm water, and shaped to the well leg. When the fracture is near either joint, the binder's-board should reach above or below the joint, as the case may be. A roller-bandage is applied from the toes up, and the inequalities about the ankle or knee filled out with cotton.

The binder's-board should now be well coated with the paste, and applied, usually to the sides of the leg. A bandage is next commenced at the foot, and the starch well rubbed in as each successive turn is made. Two additional layers applied in this manner are usually sufficient. The whole may be covered with strips of newspaper, which protects the bed and adds to the firmness of the bandage.

In about thirty-six hours, or when the bandage is dry, if it is not comfortable, or is too loose, it can be opened anteriorly with Sentin's pliers, the defects remedied, replaced, and secured with a bandage.

I have seen the binder's-board applied directly to the skin,

without protecting the latter, but have observed also the formation of blisters as a result. When the fracture is of a character to give a great deal of pain in applying the first bandage, I have padded the splints, and applied them directly to the leg, thus keeping the fragments from moving while a layer of bandage is applied.

Plaster of Paris.

When an immovable apparatus is required, the plaster of Paris also answers an admirable purpose, and in some cases is superior to the starch. Its weight is objectionable on some accounts, especially in children, who turn and twist, and hence require a bandage that moves readily with the rest of the body.

One great advantage of the plaster is the rapidity with which it sets, securing the leg in good shape while the surgeon is yet present to keep it in proper position.

This bandage is suited to very much the same class of cases as the preceding.

We prepare it in the following manner: Roller bandages are procured of the proper width and length (the usual), and the plaster well rubbed into its meshes. A bandage is first applied as in the preceding, and then the plaster roller dipped in water and applied from the foot up. Additional plaster is rubbed in during the progress of its application. Three or four layers are generally sufficient. Binder's-board in addition is seldom required.

Bavarian Splint.

The Bavarian splint has been employed to some extent in our hospital, having first been used by Dr. Burgher. Its mode of preparation and use are as follows: A piece of flannel is cut to inclose the leg, from the ankle to the condyles, a little larger than is sufficient to unite in the median line, that it may be pinned. A second piece is cut a little larger every way, especially in its lateral diameter. These are united in the middle, like the binding of a book; that is, the line of stitching would correspond to a line from the heel to the popliteal space.

This is now passed under the leg, the line of stitching corresponding to the back of the leg as described. The inner leaf of the book, as it were, is folded neatly over the leg, and pinned with both edges of the flannel looking upwards, making a dividing ridge from the patella down. The plaster is now prepared as though for making a cast or a little thicker, and poured on the under leaf of flannel on each side of the leg; this is then folded up against the leg, and formed into shape before it becomes hard. This splint may be applied without previously bandaging the leg, and possesses some advantages over other methods of treatment.

1st. It is quickly and readily applied.

2d. The leg can be held in precisely the position desired, until the splint becomes immovable.

3d. In a moment's time the splint may be opened down like the leaves of a book, the hinge being at the back of the leg, and the seat of fracture inspected, *bathed*, or if necessary the position of the fragments corrected by compress or otherwise.

It is a disadvantage to make the splint too heavy, as I have seen; a half or three-quarters of an inch being all-sufficient.

Although this splint is recommended for fractures of the whole extent of the leg, my experience would lead me to think it best adapted to fractures, simple or comminuted, of the middle section of the bones.

After the use of the plaster bandage or Bavarian splint for the first fifteen or twenty days, I have then put the leg in a starch bandage, and allowed the patient some liberty of movement, and even permitted him to move about on crutches.

Binder's-Board Splints.

Splints of binder's-board, gutta-percha, stiffened felt, and similar substances, have been long and favorably known in the treatment of these fractures, and answer a most excellent purpose in simple fractures. Their mode of application is familiar to all.

Where these splints are applicable, I usually prefer the starch bandage.

Dupuytren's Splint.

In fractures of the lower end of the fibula, the straight properly padded splint of Dupuytren, and its modifications, meets all the indications.

The padding is so placed upon the splint, which should extend several inches below the foot, as to incline the foot strongly to the tibial side, with a view to throwing the end of the lower fragment out. Care should be taken to so apply the retaining bandage as not to bring pressure to bear upon the seat of fracture.

Pott's Splint.

The long splint or apparatus recommended by Mr. Pott, is adapted to almost all varieties of fracture of the leg. But I think it best suited to fractures near the joints; that is to say, fractures of the middle portions of the bone may be treated more advantageously by other forms of dressing.

Pott's splint is particularly good because it reaches above the knee, hence is well adapted for fractures of the upper third, and extends also below the foot, giving it support, and thus answers every purpose for fractures of the lower third. It may also be very useful in certain compound fractures, and with the bandage properly applied, permits of easy inspection.

This apparatus may be briefly described as follows:

A light piece of board should be cut out to correspond to the outer side of the foot, leg, and lower third of the thigh, with the leg flexed upon the latter to nearly a right angle. This should be padded to meet the inequalities of the leg and knee, and of course is applied to the outer side of the leg, the patient lying somewhat towards the injured side.

An inner splint, except in some cases of compound fractures, is applied, extending from the inner malleolus to the head of the tibia. This may be made of binder's-board, or similar material. When the fracture is near the joint, an inner splint must be made to correspond with the outer, care being exercised in both cases to preserve the malleoli from pressure.

Adhesive Strips.

A very simple method of treating some fractures of the leg, is by adhesive strips fastened to the sides of the leg, and attached by a rope, which passes through a pulley, to a weight at the foot of the bed. Thus extension is secured, and by elevating the foot of the bed, counter-extension by weight of the body as additional security; and to give support to the leg, junk-bags of sand should be placed on each side of the leg and thigh, or binder's-board splints applied along the seat of fracture.

The Fracture-Box.

The fracture-box I have found most useful in compound fractures, the form known as Neill's apparatus answering the best purpose.

This consists of a box extending from the foot to the upper part of the thigh, with a foot-piece, of course, and hinged sides, which are divided at the knee. This box may be used straight, or in the form of a double inclined plane. The leg may be placed on a pillow, and thus supported, but I prefer the bran as better suited to compound fractures. Adhesive strips should be applied to the sides of the leg, and fastened to the foot-board. In fracture of the tibia, when the upper fragment is drawn up by the quadriceps, the box should be straight; but when the lower fragment projects, it should be placed in the form of a double inclined plane.

As soon as the external wound heals, I usually put the leg in a starch or plaster bandage, and in suitable cases allow the patient to get up.

NON-UNION AFTER FRACTURE.

The occurrence of non-union after fracture is notably rare, but the difficulties so often attending the treatment has claimed for it the attention of some of the best minds in the profession. We are indebted to George W. Norris, M.D., of Philadelphia,* for a special study of this subject.

* Contributions to Practical Surgery. Lindsay & Blakiston.

Strictly speaking, non-union is extremely rare; but if we were to include under this head cases of delayed union, or, as Amesbury terms them, "fractures of long standing," it is plain the list would be largely augmented. Practically, I think, these cases should be considered under the same head; as up to the time union does actually occur the difficulty is the same, it is delayed union.

For example, a case that has not united in a year's time, might be considered one of non-union; but subsequent treatment having induced union, it is then classified as delayed union.

This difference in classification probably explains the discrepancies between Amesbury and most other surgeons;—Amesbury including under the head of non-union his cases of delayed union.

The treatment, therefore, is essentially the same, excepting in so far that the persistently ununited fracture requires more extended and perhaps heroic measures.

Non-union may occur in either of the following ways:

1st. There may be a positive failure at direct (the normal) union.

(A direct normal union is when no intermediate or even provisional callus is required.)

2d. Where the position of the fragments is such as to require an intermediate callus, there may be a total or partial lack of this connecting medium; hence the bone remains ununited.

3d. After union has been successfully accomplished, a general or local cause may induce absorption, and end in the production of artificial joint.

In these ununited bones, the fragments may be rounded, pointed, roughened, connected by fibrous or cartilaginous bands, or a real joint may have formed.

Causes.

The causes of non-union may be called general and local.

The general or constitutional causes are numerous, but the exact amount of influence exerted by any one of these is most difficult to determine. Authorities are extremely contradictory in this regard. They are, in general terms, constitutional defects

and diseases, and all influences having a bearing upon the process of nutrition. Among the diseases we may note scurvy, cancer, syphilis, low fevers, phthisis, and general cachexia. Of these scurvy and general fevers or inflammations are most likely to interfere with union, or cause the absorption of the callus after its deposition.

There are many cases recorded where neither syphilis nor cancer interfered with prompt union, except where the latter attacked the fragments themselves.

As relating to nutrition, pregnancy, prolonged lactation, improper and insufficient diet, deficient nerve supply (paralysis), have all been observed to exert a pernicious influence, and yet union has occurred promptly in certain instances in spite of such unfavorable circumstances. Old age can hardly be considered as unfavorable to union, nor does the existence of fragilitas interrupt the rapid repair of bone. In some cases of delayed union, Hornidge observed that the urine was heavily loaded with earthy phosphates.

The local causes are quite numerous. They may consist indirectly of erysipelas or other inflammation of the soft parts, obstruction of the arterial supply or anæmia, paralysis from pressure upon the nerve-trunks, or any of these produced by tight bandaging, malposition, or continued application of cold water.

The more direct local causes are, motion occasioned by imperfect apparatus, the perverseness of patients, the too frequent removal of bandages, the too early laying aside of splints, etc., disease of the bones such as cancer, caries, necrosis, etc., wide separation of the fragments, the interposition of foreign or other bodies, such as blood-clot, spicula of bone, tendon, muscular tissue, etc., or the fragments may be so widely separated as to unite by cartilage only, forming an artificial joint which, in many instances, is easily made bearable by the employment of suitable apparatus.

Great stress has been laid by almost all authors upon motion as a prolific and frequent cause of non-union, but Hamilton seems to think that motion does not exert the pernicious influence supposed by many, and even recommends the frequent removal of

dressings, care being taken not to allow the fragments to glide upon each other, a rotary motion being less harmful. I cannot say, however, that my limited experience warrants this position, nearly all the cases of delayed union coming within my observation being clearly traceable to motion or too early use.

Treatment.

The treatment must be directed to the removal of the causes, whether general or local.

In cases of *scurvy* there must be a careful selection of anti-scorbutic remedies and diet. According to the conditions present, a selection must be made from such remedies as Merc., Nit. ac., Nat. mur., Ars., Lyc., Calc., Hepar, Sil. The diet should be largely vegetable, but fresh meats should not be excluded.

In *syphilis* we have recourse to Kali hy., Nit. ac., Cinnab., Lach., Merc., Asaf., Aurum, Phyto., etc.

Erysipelas is a most troublesome complication, but fortunately our remedies are very effective. Rhus, Apis, Bell., Ars., Carbol. ac., Sulph., Verat. vir., etc., are among the remedies found most efficient. Locally, all bandages must be removed, and some soothing application applied. Raw cotton is, in many cases, the best dressing, in others glycerin or cosmoline. In some cases a slippery elm poultice is required, if the pain and swelling are excessive.

Pregnancy of itself is not sufficient to interrupt the normal repair of bone. But there have been cases of fracture reported which showed no disposition to unite during pregnancy. This would manifest a morbid condition, however, which I believe would yield to the homœopathic remedy.

Lactation is also given as a cause of delay. The treatment here might require the weaning of the child, and certainly the use of means to restore the general health. Carbo veg. and China are important remedies.

When the delay has been occasioned by improper or insufficient diet, the treatment is obvious.

Remedies.

In the treatment of fractures in general, and cases of delayed

union in particular, I have made somewhat extensive use of Calc. phos., Phos., Calc. fluor., Silicea, Sulph., etc., but more especially the first named.

In an article upon this subject which appeared in the *Hahnemannian Monthly*, October, 1871 (vol. vii, p. 127), I made use of the following rather strong language: "*Calc. phos.*—I have used this remedy more frequently than any other, generally in the 30th or 200th, notwithstanding many use it nearly crude, upon the principle, as I have been told, 'that it is rather an article of diet, and is assimilated and goes to promote the formation of callus or bone itself.' But the absurdity of this is apparent when the acknowledged fact is remembered that the organism can appropriate nothing of an inorganic character. It is akin to the allopathic nonsense of giving iron in bulk, because, forsooth, there is a lack of that element in the blood. Most certain it is, that the phosphate of lime, iron, Silicea, or what not, acts, if at all, by virtue of its inherent drug-power, and not as a chemical agent or article of diet."

That this position is the true one I still believe, and I find that Helmuth, in his *Surgery*, refers to the use of the 30th or higher potencies in affections of bone, as in his experience much better than the lower. However, in the treatment of fractures (p. 637) he recommends the Calc. carb. and Calc. phos. in the 3d trit., when callus is tardy in forming. And further (p. 638), he recommends as "another excellent method of introducing lime into the system, ... the use of the preparation known as Churchill's hypophosphate of lime and soda."

With all respect, I must continue to hold that all lime and soda thus introduced is as promptly cast off by the excretory organs; admitting at the same time that they may have certain *medicinal* effects. It is a different matter when these elements are introduced in organic form, through vegetable or animal tissue, or even when bone itself is triturated and given, as employed in certain affections by Drs. Gatchell, Buck, and others. Then it is *organic*, and may be assimilated.

Phosphorus I believe to be admirably adapted to some cases. A German experimenter has found that *minute* doses of Phos-

phorus, given to animals whose bones had been fractured, very materially hasten union.

Silicea I have used where the fractures have been compound.

Franklin has had very favorable experience with Symphytum.

A case is given in Braithwaite (vol. 47, p. 117), where Phos. ac. proved effective after all means, medical and mechanical, had failed.

While I believe that homœopathic remedies will prove sufficient in many cases, yet there are some that will require

Mechanical Means.

The first will be to remove, so far as possible, the cause. If a foreign body or piece of muscle intervene between the fragments, it should be removed. If the fragments are not in apposition, or are too widely separated, this should be corrected. If the parts have been devitalized by continued cold applications, these should be discontinued, and gradual heat applied. If the circulation has been interfered with by pressure, this should be remedied.

Norris discusses at great length the following means of cure, viz.: Friction; blisters applied to the seat of fracture; Iodine; compression and pressure and rest; electricity; salivation; the application of caustic alkali to the integuments over the seat of fracture; seton; setons near the extremities of the bone; the passing of a ligature around the ligamentous mass connecting the fragments, and tightening it daily by means of a screw; the introduction of a wire between the fractured ends of bone; acupuncturation; scraping or rasping the fractured ends of bone; hot iron; injections; resections of the extremities of the bone; resection of one of the fragments only; excising the ends of the bone, and engaging the point of one of the fragments in the medullary canal of the other; exposing the ends of the bone and rubbing them over with caustic; actual cautery; removing the extremities of the bone and connecting the fragments by means of wire; amputation.

From the list above given, there is certainly material from which to make choice. I will only give such as have proven most generally useful in my own experience and that of others.

1st. *Compression and Rest.*—It is supposed that most cases of delayed or non-union are due to the want of immobility induced by imperfect apparatus, uncontrollable restlessness of the patient, or too early use of the injured member. In such cases the limb should be bathed with calendulated or arnicated water, rubbed carefully, a compress (not too thick) placed over the fracture, and, in case of the leg, a starch or plaster bandage applied, as described elsewhere. Calc. phos. is the remedy most commonly called for. I have seen these means prove all-sufficient in a number of cases.

2d. *Friction.*—There are a class of cases in which a little motion proves beneficial, and is even recommended by some (Smith, of Philadelphia, and Hamilton, of New York). When the fragments appear to have become covered with an exudation, or there is a total failure at reparative processes, by grasping the limb above and below each fragment, and rubbing them until you can feel the grating of a roughened surface, you will probably put the fracture in a condition to unite. If no great degree of soreness follows, this may be repeated several times, once a day, and then the leg placed in a condition of immobility. If too much inflammation is set up, Arnica or Aconite should be given, otherwise Calc. phos., or some similar remedy.

3d. *Excision.*—Not having had any experience with the seton or caustic potash, I pass on to consider excision. When the above means have failed, and the ends of the bones have become rounded, covered with cartilage, or formed into an artificial joint, I believe excision to be the most effective means that can be employed. A long incision is to be made, the ends of the bones exposed sawed off, and the case treated as one of compound fracture. I have one such case now under treatment, which has progressed quite favorably toward perfect union.

4th. *Amputation.*—This is, of course, the last resort, after all other means have failed, and the limb has become a useless appendage.

IV.

FRACTURES OF THE BONES OF THE FACE.

By J. G. Gilchrist, M.D., Tidioute, Pa.

For obvious reasons the consideration of this subject is of exceptionally great importance. When we consider that most of the suits for malpractice are brought for deformity resulting from fracture, and that the deformity is often considered worse than even functional loss; that the difficulties are not entirely fictitious in securing *perfect* restoration of form and function of fractured bones in general; that union is rapid, and a comparatively slight amount of displacement in this region produces marked and lasting deformity; we can readily see that in many particulars the importance of early and correct diagnosis, and the adoption of the best, and therefore the simplest, retentive appliances, is even greater than in the case of fractures in any other region of the body. For these reasons, and from the fact that my experience in this direction has not been large, I feel reluctant to undertake the task. It has been necessary, also, to draw somewhat from Malgaigne, Hamilton, and others.

The bones of the face are so intimately joined together, with only one exception, that it is always a matter of difficulty to determine whether one or more bones are involved in the injury. This is true of all periods of life, as the sutures, even in young persons, do not admit of separation easily; and when these sutures become more or less obliterated by advancing age, the difficulty is of course increased. In many cases it is a matter of but little moment, as deformity is not by any means the rule, and

there is so little to be done with retaining apparatus. Of the bones comprising the upper portion of the face, the cause of fracture is usually the application of direct force, as a blow or fall, fracture by *contrecoup* being next to an impossibility. It is unquestionably sometimes the case, that what is taken for a fracture is simply a dislocation, so that the difficulties in the way of a correct diagnosis are many; in some cases almost insurmountable. This is particularly the case with the malar and nasal bones; for, in spite of the learned authorities to the contrary, I have always believed the only parts usually fractured are the edges of bone forming the suture.

In this paper, then, we shall speak of fractures of the nasal, malar, superior, and inferior maxillary bones, as well as the zygomatic arch. This last is added because it is included in this region by Malgaigne, and seems to bear some relation to injuries in the facial region.

Fractures of the Zygomatic Arch.—This is a very rare fracture, at least one with displacement is, and not very readily diagnosed. The most prominent sign is displacement, but as it does not always occur, the existence of fracture may be entirely overlooked. Displacement, when it does occur, is usually inwards, although occasionally it is in the opposite direction. Dr. Packard, of the Pennsylvania Hospital (Philadelphia), saw an old consolidated fracture of this process, in which the displacement had been outwards. It is difficult to understand how this can occur, without the information of Dr. Hamilton, that the "zygoma may be broken, and displaced in the same direction (outwards), by any force which shall fracture the superior maxilla, and depress the anterior margin of the malar bone." In prosecuting experiments on the naked skull, he found that such a blow would fracture the arch at about the same place, viz., posterior to the suture, and not in its direction, but transversely; *i. e.*, the portion contributed by the temporal bone. Duverney relates one case in which the fracture was caused by a child falling on a knitting-needle, which penetrated through the mouth and fractured the zygoma, displacing the fragments outwards. A case of ordinary fracture, with the displacement inwards, Dr. Boardman, of Buffalo, saw, in which the patient was unable to open the mouth,

except by the assistance of the hands, or close it without the same assistance. By continual motion, made in this manner, the immobility was to a great extent overcome, but the depression not entirely obliterated. The symptoms of fracture are not constant. When there is *no* displacement, it is impossible to detect it, as there is neither mobility nor crepitation. The displacement can only occur in one of two directions, inwards or outwards, or in the direction of the force of the blow. Even with displacement the diagnosis is not easy at all times, as the tumefaction and swelling may entirely obscure the deformity. When the direction is inwards it will often, if not always, be found that the mouth is opened with difficulty, owing to the pressure of one or both of the fragments on the temporal muscle.

Having diagnosed a fracture, how shall we proceed to reduce it? If the displacement is outwards, but little difficulty will be experienced; if inwards, many methods have been proposed. It is an undoubted fact that, in many cases, the fracture is due to a dislocation of the malar bone. By reducing this the zygoma is, at the same time, in a measure restored. When the injury has been inflicted directly on the arch, and it is driven in on the temporal muscle, if the action of this muscle will not reduce the fracture you had better let it alone. Indeed, in Duverney's case, this was the treatment adopted, by making the patient chew on a piece of wood. It has been proposed to introduce the finger through the mouth. An attempt to do this upon even the naked skull will be sufficient to demonstrate its utter impossibility. M. Ferrier reduced one case by cutting down on the fracture, and raising the depressed portion by an elevator. I have seen one case in which a man was struck directly on the arch with an iron rod. There being a wound already existing, the elevator was readily used. But as a displacement can be but slight comparatively, and any inconvenience arising from it will soon disappear as the ends of the bones become absorbed, it will usually not be necessary to do anything. Let it alone. At all events, M. Ferrier's method is not called for.

Fractures of the Malar Bone.—In the majority of cases this will be found to be a dislocation, but custom and convenience have sanctioned the use of the term fracture to designate either

injury. A glance at the arrangement of the bones of the face, and bearing in mind the structure of this bone, will readily show how a fracture uncomplicated by fracture of some of the other bones, would be almost an impossibility. A gunshot might penetrate the bone, and of course produce a fracture, but the injury would in all probability need no treatment. A blow sufficient to produce an actual fracture, must be so severe that the brain would suffer to such an extent as to obscure entirely the lesser injury. An ordinary blow would only induce a dislocation. With fracture there would be marked deformity, and reduction would be found impossible. In some experiments of Dr. Hamilton's on the naked skull, he found fracture of the body of the bone was nearly always complicated by a disarticulation of the intramaxillary suture, opening sometimes the roof of the mouth, and altering the line of the teeth. At other times the zygomatic arch was fractured, the nasal apophysis, the ethmoid, sphenoid, orbital, or, in fact, any or all of the bones of the face. When he *did* succeed in producing a fracture, it was always double. Even on the naked skull, using all the force possible, and appliances impossible to use on a living body, it was utterly impossible to reduce such a fracture, or to replace a dislocation. This last was owing partially to the impossibility of interlocking the serrated edges of the maxillary suture. Even if reduction was possible, the bone forms attachments so soon in its altered position that it would be too late to attempt reduction, if time were allowed for the swelling of the cheek to subside. There is apt to be paralysis or some nervous symptoms due to the injury, or to the stretching the infraorbital nerve is necessarily subjected to. If there is no actual rupture of the nerve, this will in many cases pass away; if otherwise, the function may never be fully restored. *Hypericum* is a remedy to be borne in mind for this complication. The orbital margin may be actually fractured without the injury extending to any other part except the orbital bones. From extravasation, or the position of the fragments, there may be protrusion of the eyeball, which will continue until the effused blood is absorbed, or the position of the fragments altered.

Fractures of the Nasal Bones.—Fracture of these bones is more

common than of the other bones already referred to. Direct force is necessary, generally from without, and displacement occurs in the direction of the blow. There is always, or very nearly so, more or less displacement; and although the bones are small and quite fragile, the accident is not always devoid of danger to life. The fracture may be of one or both bones; they may be separated laterally, with fracture of the articulating edges; they may both be driven directly in, or one bone driven in deeply, and the other forced flatwise over it, thus turning the nose flat on the face. It is often found that the ascending process of the superior maxillary bones is fractured, in which we may expect to find injury to the base of the brain. When the blow has been from before downwards, there will usually be found a transverse fracture at or below the lower third of the bones. When from in front, the bones will generally be driven directly inwards, with more or less fracture of the articulating edges. In the case of young children, however, there is sometimes neither fracture nor dislocation, but the bones are flattened out, and they occasionally remain in this position, producing lasting and irremediable deformity. The upper portion of the bones have a greater power of resistance than many would suppose. A blow that is sufficiently strong to produce a fracture at this point, will also produce a fracture of the frontal bone and superior maxillary, the ethmoid having been occasionally driven in on the brain, in nearly every case, with more or less extensive injury to the base of the skull. The symptoms or signs of fracture are sufficiently well marked, if the case is seen at once, before the swelling of the part has obscured it. Swelling is very rapid, and the skin often rises above its natural level; the nose is also exceedingly sensitive, and hence the patient is very apt to offer much resistance to the necessary manipulations. Usually, however, we will find depression, or some deformity indicating displacement, epistaxis, and if the lachrymal canal is injured, occasionally emphysema of the lower lid. Reduction, as a general thing, is easily effected if the case has not been too long neglected, otherwise it will be difficult, at least, and sometimes impossible. It is to be secured by passing a director or small probe into the nostrils, and while raising the fragments, mould them into shape with the fingers of the other hand. Con-

solidation is so rapid, often occupying but six days, that after a delay of three or four days it will be found impossible to move the fragments. I may state here, that the fracture is nearly always repaired by immediate union, that is, without the interposition of callus. After the fragments have been replaced, the best plan is to fill the nostrils with little balls of soft lint, and support the nose externally by nicely adjusted adhesive strips. The swelling is so considerable internally, that the fragments may be pushed upwards if the lint is in one roll, while by this plan (of Hamilton's) the pellets can be removed as occasion requires. The condition of the bones can be seen from without better when we adopt the use of strips than if lead or wax moulds are used. Lead is too heavy, and as the inflammation subsides internally, the bones may be forced inwards merely from the *weight* of the dressing. Should the epistaxis be very severe, and *Erigeron can.* administered by olfaction not prove sufficient to arrest it, resource must be had to plugging the nostrils temporarily (but the plug *must* be removed as soon as possible), or M. Negrier's plan, of raising the arm perpendicularly, tried. I am unable at present to see any connection between the procedure and the result, but M. Pangire tried it in an obstinate case, and reported *immediate* cessation. Usually, however, Erigeron alone will answer. Emphysema, should it occur, will cure itself. Lachrymal fistula, should it follow, requires special treatment, that need not be noticed here, further than to call attention to the fact that as it is traumatic solely, and not dependent upon any diseased action, it is more than doubtful if anything but mechanical treatment will avail. It seems to be one of those conditions in which the indications are entirely for operative measures. In all ordinary cases, however, the only complication that need be feared is profuse suppuration, as it may proceed to necrosis or caries, and consequent destruction of the nose, if there is any strumous or cachectic disposition. Threatened suppuration seems to be best met by the use of *Calendula* or *Merc. sol.* Should an abscess, however, form, *open it at once*, and through the mucous membrane. Should deformity of the bones result, it is incurable; if of the cartilages, it may be remedied.

Fractures of the Septum Narium.—Fractures or displacements of

the nasal septum are not infrequent, occurring to a greater or lesser extent, probably, in every case of fracture of the nasal bones. Not infrequently the same thing may occur unconnected with injury to the bones of the nose. When uncomplicated with fracture of the nasal bone, the cartilaginous portion is usually found displaced, generally at the point of union with the bony septum. At other times the perpendicular plate is broken, and perhaps, occasionally, the vomer; although this bone is so much out of our reach that the fact could only be determined by autopsy. The distortion may be much or little, according as the violence inflicted was severe or not; the age of the patient also being a point to consider, as in older persons there may be a fracture of the septum, in younger a simple bending. When the displacement is directly backwards, the case is one that demands attention, as the consequences may be serious. Destructive inflammation, chronic catarrh, and a number of minor ailments may be set up by the occlusion, more or less complete, of one of the nostrils, and the irritation caused to the sensitive lining membrane. When the obliquity is lateral, apart from the deformity resulting, the case is usually not a serious one; although when the obliquity is so great that the nostril is partially closed, catarrh is very apt to ensue, and will prove incurable as long as the septum remains in the abnormal position.

When the fracture is of the bony septum, but little can be done to replace the fragments if the injury is extensive. The use of a small probe and pellets of lint may prove successful, but are not always so. When the cartilaginous portion is displaced, it is usually easily reduced by constructing a splint that passes from the root of the nose to the upper lip, but not allowed to rest upon, or exercise pressure on the nose; then by passing a silk thread or piece of silver wire through the septum, it may be raised and retained in place by tying or twisting the ends over the splint. Deformity which may result from neglect of proper treatment, may be remedied by operations, which, however, do not belong to our subject at present.

Fractures of the Superior Maxillary Bones.—One fact will be observed by all who have given attention to the subject, that those bones which are the most liberally supplied with blood-

vessels, unite with the greatest facility. This is an excellent argument, it seems to me, in favor of the position assumed by a number of gentlemen at the last session of this Institute, that the reparative material and new bone to supply the loss by molecular death, is furnished directly by the blood, and that the periosteum is only a support for the bloodvessels, and has no osteogenetic properties but through its vascularity. The bones of the face are all noteworthy illustrations, and after the nasal bones, the upper jaw is, perhaps, quicker repaired after fracture than others. For this reason Malgaigne and others counsel us never to remove the most insignificant fragment, no matter if completely detached. It is true that in the great majority of cases these fragments will become firmly united, but, as pointed out by Hamilton, cases do occur, now and then, when union cannot be produced. This is undoubtedly owing in many, if not all cases, to some diseased condition of the system.

The relation of the superior maxillary to the other bones of the face and cranium, makes the subject an interesting study. It seems almost impossible to produce a fracture of these bones, without disarranging at least all or most of the other bones of the face. A perforating wound from gunshot may indeed not implicate other bones, but the accident is rare in civil practice, and is of no particular interest as far as the mere fracture is concerned; it is no more serious, apart from the shock, than perforation of the antrum for dropsy or suppuration, and we know the injury is in this case very speedily repaired. The force producing a fracture may come from without, as a direct blow or fall on the face, or from within by the explosion of a pistol. When from without, the blow must be so severe to produce fracture, and thus consequently fracturing or disarticulating other bones, as well as often communicating severe shock to the brain, that the case is often one of extreme gravity. Cases are reported in which all the facial sutures have been disunited, the palate bones driven back on the posterior wall of the pharynx, with concussion or laceration of the brain, or severe injury to the important nerves and bloodvessels which are found in this region. In such cases, deformity is very great, and the difficulties are much increased from the fact that retentive apparatus is not easily applied.

Wiseman records a case in which the whole face was driven in in this manner, and it was barely possible to introduce a hook behind the palate, and thus draw the displaced mass back to its normal position. As soon as the hook was withdrawn, it fell back again. It was finally held in place by different assistants, until union was well advanced. Very little if any deformity followed. Malgaigne suggests that in similar cases a mask similar to a fencing mask might be used, from which some appliance might be attached to the palate. When the two bones become separated, it will be found impossible to cause them to meet closely again, owing to the serrated suture; the teethlike processes cannot be made to interlock again. In such cases the best plan is to wire the teeth together. When the fracture is from within, as in cases of attempted suicide, by the explosion of a pistol, the bones may be fractured to any extent and in every variety. It would be impossible to lay down even a general rule for the treatment of such cases; each case must be considered as the only one of its kind, and the success of the treatment is largely to be attributed to the inventive ability and ingenuity of the surgeon in charge. There are other fractures that may occur to this bone which are not of any special interest, as of the alveolar process, of very frequent occurrence, of the nasal process, etc. In the majority of cases diagnosis is not difficult, but the line of the teeth and the dental arch is a point that must not be forgotten. In the treatment, immobility being a *sine qua non*, the bandages must be firm, and the food almost entirely liquid. Consolidation is very rapid, as said before; but if fragments will *not* unite (and remedies well selected fail to set up a healthy action), they must be removed.

Fractures of the Inferior Maxillary Bone.—For various reasons this bone is more frequently fractured than most of the other bones of the face, prominently from its position. The consideration of fracture of the bone is also of rather more interest than those above referred to, inasmuch as deformity after consolidation is not simply a disfigurement, but will be a serious inconvenience; furthermore there *is* something to be done in the way of reduction and retention.

Any part of the bone may be fractured, but the body is usu-

ally the location. The rami are rarely injured, so much so that Malgaigne has heard of but one case in which the angle was broken, but Ledrun, the observer, did not suspect it until after death, when it was revealed by the autopsy. We will first consider fracture of the body. The alveolar process is frequently fractured in extracting teeth, but is of no moment or interest. When the body of the bone is the seat, it is nearly always the result of a direct injury, as a blow, or fall from a height. It has been affirmed by many that disarticulation of the symphysis is an impossibility, but there are too many cases to the contrary. In young persons the production of such a fracture is often easy, by strong pressure on the body of both bones. In older persons, or those past middle life, it would, of course, be a more difficult matter, but still far from being impossible. Pistol wounds, or the simple explosion of a blank cartridge in the mouth, have more than once torn the bones apart without other fracture. Frequently, wherever the seat of fracture may be, the fracture is single, occasionally double, rarely or never comminuted, except in the case of gunshot wounds. The direction of the line of fracture is nearly always vertical; sometimes vertical on one side and oblique on the other, and occasionally oblique through the entire thickness of the bone. In the oblique variety the direction is usually downwards and backwards, and, as Malgaigne says, "the obliquity is at the expense of the inner face of the posterior fragment and the outer face of the anterior." The symptoms, more or less constant, of fracture of the jaw are, pain, deformity, swelling, increased salivation, looseness of the teeth, and symptoms that might be expected to follow a lesion of the inferior dental nerve.

Pain.—This is the only constant symptom of fracture, and of course is insufficient to base a diagnosis upon alone. It varies greatly in intensity, being proportionate to the amount of injury sustained by the periosteum and nerves, the extent of the displacement, and the violence of the blow.

Displacement.—This bone is frequently broken, and that completely, without any appreciable displacement. In many cases, however, a careful examination will reveal a slight irregularity in the line of the teeth. The amount of displacement is de-

pendent upon the force of the blow, the amount of injury sustained by the periosteum, and movability of the fragment as far as muscular attachment is concerned. Sometimes, when the periosteum is intact, aud the line of fracture vertical, there is no marked displacement, but by close attention one of the fragments will be found slightly raised above the other, with a slight separation at the upper part (dental arch), while below the fragments are in close apposition. Malgaigne asks the question, which fragment is thus raised, and answers by referring it to the fragment receiving the blow, which is displaced in the direction of the blow. He loses sight of, or in fact denies the power of muscular action to produce this alone. I differ with him in this, as it seems impossible to produce a displacement downwards of the posterior fragment, against the action of such a powerful muscle as the masseter or temporal. When the fracture is vertical, but has been divided obliquely through the substance of the bone, there will be overlapping from before backwards. The posterior fragment having its edge bevelled off, it will be found anterior to the anterior fragment, and the overlapping will, of course, be proportionate to the displacement. The force and direction of the blow, joined to the *action of the muscles* attached to the most movable fragment, *may*, at the same time, produce displacement upwards or downwards.

Swelling.—While there is generally more or less swelling, it is often inconsiderable, and is chiefly confined to the point receiving the blow.

Salivation.—The amount of salivation depends entirely on the extent of displacement, being greater the greater the displacement, and is also dependent somewhat on the amount of mobility,—the less mobility the greater the salivation.

Loosening of the Teeth is rarely seen, unless the injury is received on them or there has been considerable jarring.

Nervous Symptoms.—I. L. Petit has given us a long list of symptoms following stretching or some other lesion of the dental nerve, and others have added to it. I am inclined to think they are exaggerated, particularly as I can quote Malgaigne and others in my support. Usually, perhaps always, there may be some little numbness or even paralysis of the lips, but this will soon

pass away. Of course if the nerve should be completely divided, paralysis would be more complete and more or less continuous; but in by far the greater majority of cases the annoyance is trivial.

After all that has been said, the diagnosis of fracture is not at all times easily made out; particularly is this the case when there is no displacement. The first thing is to detect pain at any given point, at the point of swelling particularly, although a blow being received on the chin, the swelling will be there, but the fracture may be at the neck of the condyle. After pain has been produced by pressure or otherwise, crepitation must be elicited. If pressure with the finger along the border of the bone and forcible motion of the jaw, will not produce pain at one point, we have one procedure in reserve that cannot fail to be successful if there is fracture, but the intense pain makes it a last resort. This is by pressing on both rami, as if to force them together. The pain, as said before, is most intense at the point of fracture. If there is no pain there is no fracture.

Reduction is usually easy, as the bone is so placed that it can be easily manipulated.

Retention, however, is a different matter. When it can be done, that is, when all the teeth are present, the best and simplest method is that of wiring the teeth together. When circumstances prevent this, moulds of lead, plaster of Paris, or papier maché, are in general easily made, and are very efficacious. Nutriment must be liquid, as immobility must be maintained, and it may be necessary to extract one or two teeth for this purpose.

Consolidation is very rapid, usually being complete in from thirty to fifty days. Owing to the strain the bone is subjected to in mastication, however, it is well not to be in too great a hurry.

Of the Ramus.—Fracture of the angle is rarely seen uncomplicated with fracture of the body. When it does occur, and the displacement is slight, it is extremely obscure. When detected, however, reduction is not usually very difficult. Retention is not at all times easy; the action of the various muscles in relation with this part of the bone producing different displacements according as the fragment is longer or shorter. Retention is best effected by lead moulds or binder's-board splints. Dr. Fulton

reported to the Homœopathic Medical Society of Pennsylvania (1872) a case in which a gunshot wound produced a fracture of the right jaw, body, ramus, and neck. The ramus was found broken at the middle, and the upper fragment forced inwards, with the rough edge pressing on the palatine arch and base of the tongue. This displacement was undoubtedly due primarily to the direction of the blow from without, but was more or less maintained by the action of the internal pterygoid muscle.

Of the Neck.—This fracture is exceedingly rare. Malgaigne can find but eight cases, to which Packard has added two, while Hamilton seems to be unable to find any others. Direct force can scarcely accomplish this without extensive injury to other bones in the neighborhood. Thus one of the recorded cases was complicated with fracture of the malar and temporal bones, as well as a double or triple fracture of the jaw. The explosion of a pistol in the mouth, or blow or fall on the chin, or a violent blow on the ramus, are among the causes oftenest noticed. When the fracture is simple, Bichat gives the following symptoms: "Pain, difficulty of movement, crepitation; inequality, sometimes perceptible, in the region of the fractured condyle; the facility in burying it in the zygomatic fossa by pushing it forwards; its not sharing in passive motion of the rest of the jaw; and lastly, an almost constant displacement, the condyle being carried forwards and upwards, the body of the bone remaining behind, and the two fragments being separated by an interspace more or less perceptible." These symptoms Malgaigne deems constant, save crepitation and mobility, as in two cases out of the eight he refers to there was impaction of the fragment, with complete immobility, and of course absence of crepitation. One important sign is mentioned by Ribes, viz., the chin is drawn to one side. This is also observed in dislocation, but the differential diagnosis is easy, as in luxation the chin is drawn to the uninjured side. The reverse occurs in fracture, owing to the muscles drawing the jaw upwards and backwards without opposition. The condyle, when completely separated from the bone, remains in the glenoid cavity, but the pterygoid muscle rotates it upwards, forwards, and inwards. It follows, therefore, that a primary indication in reduction is to divide this muscle. When

there is little displacement, the best treatment is to avoid attempts at reduction, merely enjoining perfect rest, secured, if necessary, by a bandage. When the displacement is considerable, the best of treatment seems to have failed in restoring the conformation, or even perfect utility of the jaw. I would suggest a modification of Malgaigne's plan, consisting in a division of the pterygoid *first*, then by passing the finger into the mouth press down the fractured condyle, at the same time drawing the chin forwards, and rotating it to the sound side. When the fractured surfaces are thus brought into contact, close the jaw firmly, and apply a bandage tightly. Nourishment must be, in this case also, liquid, and a tooth or two extracted, if required, to facilitate it. Union proceeds rapidly, often being complete by the thirtieth day.

V.

UNUNITED FRACTURES AND DELAYED UNION.

By H. F. Biggar, M.D., Cleveland, O.

The reparative power of nature, observed in the restoration of impaired or totally arrested function of various organs in consequence of disease or injury, is nowhere seen to be more actively exhibited than in the reparation usually following the fracture of bone. Accordingly in the discussion of those cases in which bony union is delayed or does not occur at all, we approach a topic eminently worthy the profound study of every present and prospective member of this bureau. And in presenting the substance of the literature of the subject, together with the more interesting cases collated, we do not expect so much to throw new light upon this variety of surgical affections, as to call attention to the necessity of closer observation, and more thorough experimentation relative to the best methods of treatment to be adopted.

The number of published cases of imperfect union of fractured bones found in journals, hospital reports, and text-books, compared with the immense number of fractures that have come under the observation of surgeons, shows that the unfavorable results to which we refer are exceedingly rare. It may be observed, however, that the delicacy felt by the members of the profession in giving publicity to their bad cases, may have some influence in reducing the sum total of the recorded examples; still the following testimony, gathered from the most reliable

sources, is very conclusive. Mr. Walker, of Oxford, states that in not less than one thousand fractures, simple and compound, coming under his immediate care, not more than six or eight resulted unfavorably.* Monfalcon, during a term of six years in the Lyons Hospital, one of the largest of Europe, met with only one case of non-union.† According to Lonsdale, not more than five or six cases resulted badly (except those within a capsule), out of nearly four thousand fractures treated at the Middlesex Hospital.‡ Sir Stephen Hammick, in an extensive experience at the Plymouth Hospital, records only three cases in which union was not complete.§ Of the great number of fractures observed by Mr. Liston, only one resulted in non-consolidation of the fragments.‖ Dr. Peirson prepared a table of three hundred and sixty-seven cases of fracture, with only one unfavorable termination.¶ But one case of false joint occurred in the Richmond Hospital during a term of six years.** Mr. Stanley remarks, that in an experience of sixteen years, in the largest hospital in London, and in the hundreds of cases observed by Mr. Lawrence, he could not refer to a single unfavorable result.†† Of the twenty-two hundred and ninety-five recent fractures treated at the Pennsylvania Hospital, from 1830 to 1850, all resulted in firm union.‡‡ To the above statistics, collected by Dr. George W. Norris,§§ may be added Morland's statement, that only one case occurred in the Massachusetts General Hospital, out of three hundred and sixty-seven.‖‖ And Hamilton, of New York, who has enjoyed extensive surgical experience, estimates that non-union does not occur on an average of more than once in five hundred cases.¶¶ In view of the fact that comparatively few surgeons have had an opportunity to make

* Lond. Med. and Phys. Jour.
† Mems. sur l'état actuel de la Chir. Paris, 1816.
‡ On Fractures, p. 89. § Prac. Rem. on Amp., Frac., etc., p. 122, 1830.
‖ Lancet, ii, p. 168, 1835–6.
¶ Rem. on Fractures. Boston, 1840.
** Cyclop. of Prac. Med. p. 87, 1842.
†† Am. Jour. Med. Sci., p. 548, 1851.
‡‡ Am. Jour. Med. Sci., vol. i, N. S., 1841, and vol. xxiv, N. S., 1852.
§§ Contrib. to Prac. Surg., pp. 11, 12.
‖‖ Frac. and Disloca., Hamilton, p. 62. ¶¶ Idem.

anything like extended observations on this variety of surgical affections, this subject is less thoroughly digested, and less appreciated by the profession, than any other of a surgical nature regarded of equal importance. Hence, in our discussion, it is desirable to present its bearings in a manner to secure for our observations the most practical character; and I accordingly call special attention to the *causes* liable to produce imperfect union, as a knowledge of their influence will prove a valuable element in preventing at least unfavorable results. These are properly divided into local and constitutional.

A. LOCAL CAUSES.—1. *Free motion of the injured parts* occurring frequently, and too early after the accident, may be enumerated as unquestionably the most common cause contributing to delay or permanently to prevent firm union of the fragments. Mr. Amesbury,* who, fortunately or unfortunately as the case may be, had occasion to report *fifty-six* cases coming under his notice, regards this cause as the most frequent, which opinion is also shared by Dr. Gross,† and other equally high authorities. Precisely why *slight* motion does not prevent bony union, is explained by the manner in which the bone-corpuscles are deposited. They are not disposed eccentrically, from a single point or centre of ossification, but at a multitude of points in a transitional stroma. By free motion the new granulation tissue or the fibrous bands are greatly elongated, and the deposit of bone-corpuscles does not keep pace with their formation and elongation; and when the intermediate tissue has its anatomical character fully established, bony infiltration is an improbable, if not an impossible event (Hamilton).‡ Every surgeon is familiar with the fact that it is extremely difficult to prevent more or less mobility of the fragments in fractures of the clavicle and the ribs, and still firm union is almost invariably secured in these bones; while it is not unfrequently the case, that unruly patients, and those who are improperly nursed, suffer considerable motion of the parts in fractures of the femur, humerus, and bones of

* Edinburgh Medical and Surgical Jour., vol. lvii, p. 197.

† System of Surgery, vol. i, p. 937.

‡ Principles and Practice of Surg., p. 251.

the leg and arm, and yet enjoy ultimately a perfect cure. But just how much mobility of the broken bone may be allowed with safety, is not a question of pure mathemathics, and independently of all exceptions and remarkable cases, it may be admitted as a principle in surgery, that recent fractures will unite more speedily and firmly by maintaining complete rest of the injured parts, than by allowing any considerable degree of motion.

2. *Want of Apposition of the Fractured Surfaces.*—(*a.*) In those cases attended by loss of the osseous substance to a greater or less extent, the chances of consolidation are, of course, correspondingly decreased, though an unfavorable termination is not uniformly the result. Van Swieten, Gooch, Phillips, and La Motte, quoted by Norris, relate instances in which from four to six inches of bone has been regenerated, there being little or no shortening of the limb, which was every way serviceable. In the patella, olecranon, and os calcis, owing to the impossibility in most instances of keeping the fragments in contact, the union is generally of a fibro-ligamentous character, only a comparatively small space being filled in these structures by a bony deposit. (*b.*) Oblique fractures, from their not being readily maintained in a condition of perfect reduction, together with the frequent motion liable to occur from the patient's unwillingness to endure unremittingly the necessary extension and counter-extension, may be considered unfavorable to a prompt and solid union. I cannot, therefore, too strongly urge the necessity of judiciously employing the proper extension by means of the apparatus popularized by Dr. Gurdon Buck and Dr. Swinburne, aided by an early application of the starch bandage.* ·

3. *Disease of the Fragments.*—In compound fractures in which the extremities are denuded of their periosteum and there is prolonged suppuration, the fragments are liable to suffer in consequence of necrosis, that may be so extensive as entirely to prevent a reparation by bony deposit. A number of cases of this character have been reported by different surgeons (Amesbury, Petit, Duverny, and Heister). Abscess of the bone may produce a like result. Drs. Pierson, Sir B. Brodie, and Norris give ex-

* Contributions to Practical Surgery, p. 42.

amples, however, in which satisfactory union was secured notwithstanding the presence of disease. Brodie writes that he "had a patient in whom some of the bones had nodes upon them, and were much enlarged. A portion of the clavicle was enlarged, and much diseased besides. This man broke the collar-bone through the diseased part. I bound up his arm, and it united as soon as ordinary fractures."*

4. *Foreign Bodies between the Fragments.*—Bullets, pieces of iron, and detached portions of bone have been sometimes found lodged between the extremities, and have thus hindered union in consequence of inducing prolonged suppuration, with debility of the patient, at the same time preventing perfect apposition of the parts. Though several writers have considered that the interposition of less solid substances, as tendinous or muscular tissue, fascia, and blood-clots, may act as a cause to prevent consolidation, it is probable that their presence is merely an accidental circumstance, and that they rarely, if ever, exert any considerable influence in that direction. The absorption or ulcerative destruction of such bodies is too readily effected for them to prove a noticeable obstacle to union, provided the other necessary conditions are favorable.

5. *Tight Bandaging*, and 6. *Free and long-continued use of Cold Applications*, may be mentioned as possible and easily avoidable causes.

7. *Too early use of the Limb.*—This is liable to induce absorption of the callus, and thus allow more or less freedom of motion of the ends of the bone; and if rest is not at once insisted upon, a false joint will be likely to result.

Of these several local causes, it may be said that each has, in particular instances, been considered of sufficient importance to account fully for the want of proper consolidation; while in other cases they have been greatly increased or otherwise modified by other attending circumstances, so that their real influence has not been fully appreciated. In other instances, again, union has occurred when one or more of these causes has been somewhat actively present. At all events, it becomes every careful and

* London Med. Gaz., xiii, p. 56, 1833, quoted by Norris.

conscientious surgeon to thoroughly investigate these causes as opportunity affords, that the combined observations of the many may here give us, if possible, definite and indisputable testimony.

B. CONSTITUTIONAL CAUSES.—Among the causes that may be denominated purely constitutional, there seems to be no one which will invariably occasion defective union. Such affections, however, as syphilis, scurvy, low type of fevers, cancer, pregnancy, lactation, general debility, and the like, have each been looked upon as preventing the formation of callus, and in some instances have undoubtedly been the cause of non-union. On the other hand, firm union has readily occurred in spite of the presence of these conditions; and hence we are here, as in local causes, somewhat at a loss to know, in advance, just how much influence any one of these causes may exert in a given case.

1. *Syphilis.*—Several writers, the most prominent of whom are Sauson, Beuloc, and Condie, have regarded syphilis as a cause of imperfect union, and have adduced cases favoring this view. The following case, coming under my own observation, is worthy of mention:

T. B., æt. 24, sailor, suffered fracture of the femur, and was treated for four months by the surgeon to the Marine Hospital of this city. Liston's splint was applied during this time, and, so far as I know, the patient received proper attention. No union of the fractured extremities of the bone had resulted from the treatment at the time of my examination. The patient was distinctly syphilitic. Resection was decided upon, as promising the best results, and accordingly the operation was performed, and the ends of the bone maintained in position by extension and side splints. Three weeks subsequently, ulceration of the deep profunda followed, which accident necessitated a ligation of the artery near its origin. Seven days afterwards ulceration of the coats of the femoral immediately below Poupart's ligament occurred, causing fatal hemorrhage. A post-mortem examination revealed extensive syphilitic disease of the arteries.

Other high authorities, as Lagneau, Oppenheim, and Bérard, maintain a contrary opinion, and we are therefore obliged to

await further investigations before pronouncing with certainty upon this disease as a probable cause of non-union.

2. *Cancer.*—Notwithstanding this affection is liable to affect the bones, and render them brittle, and accordingly easily broken, still it has been observed that bones thus diseased have united promptly under the ordinary treatment. Sir B. Brodie* mentions the case of an old woman dying of cancer, who broke her femur while turning in bed, and in whom the fracture united as well as under apparently more favorable circumstances. Mr. Liston gives a similar case. Other examples are given in which cancerous deposits were found in immediate contact with the fragments, and no union of the bones took place (Coates, Bell, and M. Coling). In the opinion of Mr. Curling, the fragility of the bones is occasioned by eccentric atrophy, which, independently of a deposit of cancerous matter at the seat of fracture, is not attended by any delay of union. The teachings at present as regards the influence of this disease upon the consolidation of fractures, may be stated to be, that when the fragments are the seat of a true cancerous deposit, with more or less absorption of the osseous tissue, union is prevented; but that the existence of the cancerous cachexia in the system does not necessarily, if at all, retard the formation of callus.

3. *Pregnancy and Lactation.*—That these have sometimes been a disturbing element in the system to an extent that has diminished the reparative power of nature in effecting the consolidation of fractured bones, there can be no doubt; but whether their agency is in any way peculiar, or whether any other circumstances leading to equally great debility, as severe and oft-repeated fatigue, exhaustive hemorrhages or other discharges, insufficient food, and so on, would not be as certainly effectual in retarding union, must be considered an open question. Mr. Latta, Liston, Leveille, Breschet, and others, report cases in which union occurred in the ordinary time. However, Werner, Hildanus, Wilson, Alanson, Bard, and Condie, have given examples in which the process of union was retarded by these condi-

* London Med. Gaz., xiii, p. 56, 1833 (Norris).

tions; still, it is not clear but that the delay was more directly due to the coexisting debility.

4. *Scurvy and Fevers.*—The presence of these affections does not always conduce to impair the formative power, but is capable in some instances of not only retarding the union, but of actually producing an absorption of the provisional callus already formed. (Mead,* Budd.†) Norris‡ has seen erysipelas produce softening of the callus; Desault§ has seen it result in consequence of a severe diarrhœa; and Schilling,§ Mantell,§ and others, have observed it in fever, and in various acute local disorders.

Still other causes may be enumerated as exercising a possible influence: thus, the withdrawal of any habitual stimulant; cutting off the direct blood supply by ligation of the principal artery; the want of nervous influence, resulting from paralysis; and advanced age. In some instances, however, the closest scrutiny fails to detect the real cause of the untoward result. Sir James Paget remarks that it "sometimes appears like a simple defect of the formative power; a defect which, I believe, cannot be explained, and which seems the more remarkable when we observe the many changes which may at a later time be effected, as if to diminish the evil of the want of union."‖

TREATMENT OF UNUNITED FRACTURES.—The difference between delayed and non-union has reference only to the length of time elapsing; thus, if the union does not occur within the usual time, or in the course of several months, it is called delayed union. If the delay is still longer protracted, to one or more years, it is termed non-union, and will undoubtedly require some operative measure for its relief. There are two distinct periods recognized in the formation of the callus, constituting the process of repair. During the first period, there is formed what is known as the "provisional callus," which ordinarily requires about forty days. The second period, including the first, extends over a space of eight months or a year, during which time the "definitive callus" is thoroughly formed, and at the expiration of which time the provisional callus has become gradually absorbed.

* Med. Works, p. 442. † Tweedie's Cyclopedia. Scurvy (Norris).
‡ Contributions to Practical Surgery, p. 58. § Op. cit.
‖ Surgical Pathology, p. 193.

There are no less than twenty-two procedures, which have, from time to time, been proposed by different surgeons for promoting consolidation in the affections under consideration. They are as follows:

1. *Friction*, or a rubbing of the fractured extremities together; 2. *Blisters* applied to the seat of fracture; 3. *Iodine* applied to the injured part; 4. *Compression* and rest; 5. *Electricity;* 6. *Salivation;* 7. *Caustic alkali* over the seat of fracture; 8. The *seton* passed between the fragments, or near the extremities of the bone; 9. *Ligature* passed around the ligamentous mass connecting the fragments, and tightening it daily by means of a screw; 10. *Wire* introduced between the fractured ends of the bone; 11. *Acupuncturation;* 12. *Electro-puncture;* 13. *Scraping* the ends of the bones; 14. *Heat* applied by means of a hot iron; 15. *Injections* of stimulating substances; 16. *Resection* of both fragments; 17. Resection of one fragment only; 18. *Excising* the ends of the bone, and afterwards engaging the point of one of the bones in the medullary canal of the other; 19. *Exposing* the ends of the bones and applying caustic; 20. *Actual cautery;* 21. *Removing the ends* of the bone and connecting the fragments by means of wire; 22. *Amputation.**

Of the various measures recommended, Billroth† regards the *bone suture* and *resection*, even in the most serious cases, as capable of giving proportionately the quickest results. Before resorting to either of these operations, it will undoubtedly be advisable, in most cases, to first try the efficacy of less severe procedures, as friction, compression, and rest, the seton, and the application of a caustic to the seat of fracture. Should one or more of these fail, an operation as above stated should be performed.

Aside from the case given above, two other cases of the affection in question came under my care, which I beg leave briefly to submit:

J. R., æt. 26, laborer. This man was the subject of an oblique fracture of the left femur in consequence of direct violence. The

* These different methods are enumerated and spoken of at length by Dr. Norris, in his Contributions to Practical Surgery, p. 60 et seq.

† Surgical Pathology, p. 211.

case was treated by an application of Liston's long splint, and afterwards by extension as recommended by Gurdon Buck, together with dressing splints. In eleven weeks after the injury, notwithstanding the deposit seemed quite sufficient, there was no close union. A vigorous rubbing of the fractured ends was now practiced, a stiff sole-leather splint was snugly laced on the limb, and in nine months the function of the bone was fully restored.

W. S., æt. 47, laborer, fell upon the pavement and fractured the patella transversely, the characteristic symptoms being prominently marked. The knee was dressed by the use of Kolbe's splint, which kept the fragments as well in apposition as is possible in such cases, but still no union occurred. The splint was employed for seven weeks. At the expiration of this time active motion was instituted, which induced a free deposit that subsequently rendered the limb very serviceable—the patient being able to walk without a cane, and to support the body easily with the other limb flexed.

Norris* gives the summary of one hundred and fifty cases of ununited fractures, collected and tabulated by himself, together with the conclusions that seem to be warranted.

48 occurred in the femur, of which 31 were cured, 9 without benefit, 6 died, 2, result not stated.

33	"	"	leg,	"	32	"	1	"	"					
48	"	"	humerus,	"	31	"	14	"	"	3	"			
19	"	"	forearm,	"	17	"	1	"	"	1	"			
2	"	"	jaw,	"	2	"								

Of 46 cases in which the seton was employed, 36 were cured, 3 partial cures, 5 no benefit, 2 died.

" 38	"	"	"	resection	"	24	"	"	1	"	"	7	"	6 "
" 36	"	"	"	pressure and rest	"	29	"	"	1	"	"	6	"	
" 8	"	"	"	caustic	"	6	"	"				2	"	
" 11	"	"	"	friction	"	11	"	"						

Of 11 cases in which other methods were employed, 7 were cured, 1 received no benefit, 2 died, 1 result not stated.

He adds that the results in the preceding table exhibit, probably, with tolerable accuracy, the success of the seton and resection, though not of the other methods of treatment, which, being milder, were, in several of the cases, employed before the two just named, and more severe ones, were resorted to. Thus it would appear as if all the cases treated by frictions had been cured, whereas in fact, in the 36 cases cured by the seton, frictions had

* Contributions to Practical Surgery, p. 110.

been unsuccessfully tried in 8 of them; and in the 24 cases cured by resection, they had been equally unavailing in 5 of them.

CONCLUSIONS.—1st. That non-union after fracture is most common in the thigh and arm.

2d. That the mortality after operations for its cure follows the same laws as after amputations and other great operations upon the extremities, viz., that the danger increases with the size of the limb operated on, and the nearness of the operation to the trunk, the mortality after them being greater in the thigh and humerus than in the leg and forearm.

3d. That the failures after operations for their relief are most frequent in the humerus.

4th. That failures are not more frequent in middle-aged and elderly than in younger subjects.

5th. That the seton, with its modifications, is safer, speedier, and more successful than resection or caustic.

6th. That incising the soft parts previous to passing the seton, augments the danger of the method, though fewer failures occur after it.

7th. That the cure by seton is not more certain by allowing it to remain for a very long period, while it exposes to accidents.

8th. That it is least successful on the femur and humerus.

VI.

SEVENTY-FOUR CASES OF FRACTURE.

By Malcolm Macfarlan, M.D., Philadelphia.

In this list I have purposely omitted compound fractures, or rather those for which amputation had to be performed, as well as complicated cases requiring special treatment, the object being to present usual cases of simple fracture of the extremities and clavicle, which I have treated by position, rest, and mechanical means. The first dressings were very loosely applied for two or three days, until swelling subsided, and permanently put on so as to allow of frequent inspection of the parts, to see that no mischief was being done.

Fractures of the clavicle, here noted, were caused by falls on the elbows or hands, while the shoulders were extended, the shock being made by the head of the humerus.

1. April 15th, 1872. Son of E. M. V——, 4 years. Fracture of right clavicle at middle; broken ends driven through the skin. The forearm was flexed; arm raised, supported, and elbow carried backwards; pad in the axilla; circular and figure-of-8 bandage around the chest and opposite shoulder; forearm supported by a sling. Wound healed, and good bony union in four weeks.

2. September 7th, 1872. A. D——, 28 years. Hospital case. Left clavicle fractured; treatment as above; dressings removed in three weeks; place of union made prominent by callus; good result.

3. T. D——, 45 years. Left clavicle broken near acromion,

March 24th, 1874. Treated as above; union in three weeks, and good result.

4. March 26th, 1874. A. S——, 8 years. Right clavicle broken at middle. Treated as case No. 1, with good union in twenty-five days.

5. May 1st, 1874. Boy of E. C. W——, aged 4 years. Left clavicle broken near the sternum; bandage and pad treatment; good union in three weeks.

On account of the size and uses of the upper part of the olecranon and lower part or base of the radius, it is found they are most liable to fracture.

In broken shaft of either bone of the forearm, the convex padding on an angular splint serves to overcome the action of the pronators, and keep the bones apart. Barton's fracture is caused by a fall on the palm; best treated by a Bond's or pestle-shaped splint; hand adducted; forearm flexed, and against the chest; thumb upwards, with a pad under the radius just above the fracture, and pad over the lower fragment, secured by an outside pasteboard-splint to force the bones in apposition. I have found the best results from this treatment of a fracture usually attended with more or less deformity and impaired usefulness.

6. Barton's fracture, left radius, August 2d, 1869. J. R——, aged 47. Joint stiff a long while after removal of splint (which was in three weeks); passive motion overcame the difficulty.

7. September 15th, 1871. Miss E. W. R——, aged 30. Barton's fracture of left radius; excellent result; no deformity; treated as above.

8. Mrs. H——, aged 60. September 29th, 1871. Barton's fracture, left radius; result good; slight remaining stiffness.

9. October 8th, 1871. Fracture of both bones of left forearm, middle third. Boy, aged 18 (patient of Dr. Williams). Angular splint; excellent result.

10. Fracture of both bones of right forearm, middle third, November 16th, 1871. Hospital case. C. E——, aged 29. Splints removed in thirty days; good result.

11. Fracture of left radius and ulna below middle third. Lady at Mrs. W——'s, aged 40. Good result.

12. Barton's fracture, left. Case sent by J. K. Lee, M.D.

Lady, aged 65. November 27th, 1871. Caused by a fall downstairs; excellent result.

13. Fracture of left radius below its middle, February 23d, 1872. Mr. R——, aged 20. Perfect result.

14. Barton's fracture of the right radius, February 24th, 1872. L. M——, aged 36. Hospital case. Excellent result.

15. July 13th, 1872. J. C——, aged 34. Fracture of right ulna above its middle. Hospital case. Left the house too soon; result unknown.

16. Fracture of left radius below its middle, with dislocation of ulna at the wrist, August 24th, 1872. Mrs. B——, aged 68. Good results.

17. Barton's fracture of left radius, October 20th, 1872. Mrs. H. T. B——, aged 49. Dressings removed in four weeks; good result.

18. Fracture of left radius, two inches above wrist, February 12th, 1873. S. A——, aged 5. Hospital case. Good result.

19. May 6th, 1873. Hospital case. E. H——, aged 10. Fracture of right radius (Barton's); discharged with good union.

20. Hospital case. June 6th, 1873. W. L——, aged 15. Compound fracture of left radius below near middle; recovery, with useful union.

21. July 1st, 1873. Hospital case. W. W——, aged 54. Broken left radius near the joint; discharged cured July 26th.

22. Fracture of both bones of the right forearm at the middle. B. T——, aged 12. August 7th, 1873. Excellent union, with all the motions; splints removed in twenty-four days.

23. January 1st, 1874. L. G——, aged 30, admitted to hospital with a compound comminuted fracture of bones of left forearm and other injuries. Died of lock-jaw January 9th.

24. Mrs. G——, aged 40. February 8th, 1874. Fracture of both bones of left forearm below middle third; good union, with ability to make proper movements, in four weeks.

25. Hospital case. February 14th, 1874. S. H——, aged 32. Right radius and ulna both broken; result unknown, as he left the house in a day or so.

26. Fracture of the surgical neck of the right humerus, June 4th, 1869. L. K——, aged 27. Caused by direct violence

against the shoulder in a fall from a carriage. These cases resemble a dislocation downwards, but differ in that they are caused by direct force. There is more shortening; crepitus is felt, and greater mobility. Treated by a shoulder-splint of thick, well-moulded binder's-board; a pad in the axilla; an inside angular wooden splint, with counter-splints of pasteboard to secure the extremity, and a sling to support the whole. The dressings were removed in five weeks, and union found strong; motions well made.

27. August 26th, 1869. Fracture of the surgical neck of left humerus. Mother of Mr. G. C. T——, aged 70. Dressed as above; splints removed in about seven weeks, with excellent result; is as well now as ever.

28. Fracture of right olecranon, May 3d, 1870. R. R——, aged 20. The result of direct violence in falling from a ladder. Applied Stromeyer's anterior splint, keeping the arm nearly straight, but allowing motion at the elbow by turning the screw; good union by ligament in four weeks.

29. Fracture of right acromion process, with downward dislocation of the shoulder; dislocation reduced; successful treatment by rest; confining and supporting the extremities in a sling.

30. Fracture of the right internal condyle, December 7th, 1871. Mrs. C——, aged 35. Fracture vertically separating the condyle; Stromeyer's anterior splint applied, fixed at a right angle, and passive motion made after two weeks; useful or perfect motion, and good union in five weeks.

31. Dr. Earhart sent me a boy aged 13, December 12th, 1871, with a fracture and separation of the inner condyle. Treated in a similar manner, and with like result as the preceding.

32. Fracture of external condyle of right arm, January, 1872. H. R——, aged 6, treated successfully as in Case 30. Sister of H——, about the same time broke both bones of the forearm at the middle third; union was good and motion perfect in four weeks. Children of Dr. H. R——, homœopathic physician.

33. January 30th, 1872. Fracture of the right humerus middle third. W. B——, aged 48; hospital case; struck by a locomotive. In simple fracture of the shaft, I use an internal right-angle

wooden splint, confining at once the arm and forearm, with three other and smaller splints for the arm proper; the whole secured by bandages, and supported by a sling. This case was treated in the above manner, but during the treatment the man left the house several times, being given to liquor; got the bandages disarranged, and no union resulted; the first time in my practice this has occurred. A subsequent operation was performed by cutting down and excising the ends of the bones, with eventual good results.

34. Simple fracture of the right humerus about its middle. February 10th, 1872. E. B——, aged 33; hospital case. Treated like Case 33, with good union in five weeks.

35. Fracture surgical neck left humerus, May 10th, 1872. Miss H——, aged 50. Treated like Case 26; firm union, and excellent use in five weeks.

36. Fracture of the surgical neck of the left humerus, June 25th, 1872. Mrs. F——, aged 50. Treated as above; good union in six weeks.

37. Fracture inner condyle of left arm, July 18th, 1872. W. H. M——, aged 13. Treated like Case 30; good union, with motion as before, in five weeks.

38. Fracture inner condyle left arm, October 9th, 1872. J. S. W——, aged 12. Same history and result as No. 37.

39. Fracture surgical neck right humerus, June 27th, 1873. Mrs. L——, aged 68. Treatment and good result as in Case 26.

40. Hospital case. I. C——, aged 20. October 20th, 1873. Fracture right olecranon; same history and result as No. 28.

41. Fracture of the surgical neck of the left humerus, November 25th, 1873. Lady, aged 62, at Mrs. W. B. H——'s. Same treatment and result as No. 36.

42. Fracture surgical neck of left humerus. Mr. J. C. C——, aged 85. Treatment and result like the preceding case.

43. Fracture of the right femur, middle third, April 8th, 1870. J. McM——, aged 12. Case sent by Dr. W. W——. Treated by Liston's long outside splint, jointed to a foot-piece, which was connected with a short inside splint, extending perineal band; coaptation of the fragments made under ether, by flexing the thigh, extending or drawing on the knee; then brought

down into the apparatus, padded, and secured by reversed bandages. Dressings removed in six weeks, with about half an inch shortening. Four years after I measured the limb, and must say shortening was less; there is no limping whatever.

44. J. S——, aged 34. Fracture right femur through the great trochanter alone, and maltreated some time before my visit. April 15th, 1873. Caused by having his foot caught in shafting; tripped. I treated him by Amesbury's double inclined plane, resulting in union, stiffness of joint, and but slight usefulness.

45. Fracture left femur, middle third, September 23d, 1870. M. M. C——, aged 10. Caused by a fall over a large sugar hogshead. Treated as Case No. 43. Shortening of half an inch by measurement, when splints were removed, six weeks after the accident. Good union.

46. Fracture of the neck of the right femur, within the capsule, August 9th, 1871. Mrs. M. D——, aged 89. Treated by a double inclined plane; Amesbury's splint; angle changed backwards and forwards every few days. After eleven weeks, ligamentous union strong enough to bear her weight. She is now able to go about with a cane; is now alive and well, going about. Shortening of two and a half inches.

47. Fracture neck of right femur, September 6th, 1872. Mrs. K——, aged 74. Treated as Case 46. In the splint seven weeks; ligamentous union strong at the end of that time. Shortening of two inches.

48. Fracture neck of left femur, September 9th, 1872. Mrs. P——, aged 76, fell from high flight of stairs. Treated as Case 46. Well enough in nine weeks to use a crutch, and at present writing, June 1st, 1874, is able to limp along without any support whatever, but walks well with a cane only. Shortening of one inch and three-quarters.

49. September 15th, 1872. Called to see the mother-in-law of Dr. T——, who just sustained a fracture of neck of left femur. Treated successfully by being placed on a double inclined plane of pillows.

50. Fracture of the left femur, middle third, January 26th, 1873. Mrs. A. C——, aged 50. Hospital case. Treated as cases mentioned above; good union; discharged well March 6th, 1873.

51. Fracture of the neck of the left femur. Miss H. H——, aged 83. Caused by a fall in getting out of bed, August 3d, 1873. Died in four weeks of exhaustion or old age.

52. Hospital case, December 21st, 1873. G. G——, aged 84. Fracture of the neck of the right femur. Discharged February 11th, 1874, as unruly, before good fibrous union resulted. Treated as Case 46.

53. Double fracture of middle third of left femur, December 30th, 1873. H. M——, aged 10. Treated as Case 43. Good union in six weeks; shortening of one inch and one-quarter. Very critical case; run over and bone crushed by wheel of a heavy two-horse cart.

54. January 12th, 1874. Miss A. McL——, aged 65. Fracture of the neck of the right femur within the capsule. Treated as Case No. 46. Confined in splint for eleven weeks; union good and strong; shortening one inch and three-quarters; able to go about with slight support of a stick.

55. J. B——, aged 29, fell from a passenger railroad car. Fracture of the right femur above middle third, January 24th, 1874. Treated as Case 43; confined to splint seven weeks; shortening of half an inch by measurement.

56. Transverse fracture of the left patella, May 13th, 1869. Mrs. B——, aged 60. Treated by a single inclined plane and perforated knee-cap, confining the upper fragment in position; kept in splint eight weeks; separation of fragments increased to three-quarters of an inch after she went about; fracture caused by muscular action; excellent use of her knee.

57. Miss W——, aged 36. Transverse fracture of the left patella, July 13th, 1873, caused by muscular action, a twist or jar given the thigh when a horse-car started too soon or before she could get out of it, with laceration of the fibrous expansion over the knee-joint, and injury to the ankle. Treated as the preceding case; good fibrous or ligamentous union of the fragments; separation of less than half an inch. She is otherwise an invalid at present.

58. Comminuted or double fracture of the left leg, lower third, July 15th, 1870. J. F——, aged 24. Caused by the fall of a heavy piece of machinery. Treated by position alone, without

using force; adjustment of the bones; kept in proper line in a common fracture-box, with wheat-bran packing. In eight weeks, union good enough to bear weight on it; no shortening.

59. Pott's fracture of right ankle-joint, outward dislocation, attended by fracture of the lower third at the fibula, and of the inner malleolus. Treated, after adjustment, as in the preceding case, with good result and a useful limb in ten weeks.

60. Outward dislocation, attended by fracture of the lower third of the fibula, and rupture of the internal lateral ligament, right leg, April 6th, 1871. Miss L. H——. Adjustment and rest in a fracture-box; entirely well in six weeks, with joint apparently having as good and useful motion as ever.

61. Fracture of right tibia and fibula, middle third, August 5th, 1871. M. L. M——, treated successfully as Case 58. No shortening nor deformity; apparatus removed in five weeks.

62. Broken left fibula, lower third, September 23d, 1871. F. L——, aged 46, pitched out of a wagon. Inside and outside moulded splints to the leg; removed in six weeks; good union and use as before the accident.

63. May 31st, 1872. Hospital case, E. W——, aged 42. Fracture of the left tibia, below its middle. Treated as Case 58, with good result; discharged July 5th, 1872.

64. Hospital case, C. L——, aged 22. Fracture of the right tibia, July 10th, 1872. Case in every respect resembling the preceding, with like result.

65. September 18th, 1872. Hospital case, S. M——, aged 12. Pott's fracture of right ankle-joint, resembling Case 59; treatment and result the same.

66. Fracture left tibia and fibula, below their middle. November 15th, 1872. M. B——, aged 30. Hospital case; a repetition of Case No. 58 as to treatment and result; splints removed in six weeks.

67. Hospital case; July 3d, 1872, J. N——, aged 15. Pott's fracture, right leg; case somewhat resembling No. 60, but having fracture of inner malleolus. Recovery, with limb as useful as ever.

68. July 5th, 1873. J. G——, aged 27. Hospital case; be-

lieved to be Pott's fracture. Received treatment, but result unknown, as he left too soon.

69. Hospital case; Pott's fracture left leg; February 12th, 1874. J. H——, aged 9, received treatment; treatment and result as in Case 59.

70. A. B——, aged 27. Pott's fracture; right internal malleolus broken off high up and projecting greatly forwards, caused by fall of a piece of heavy iron from a truck he was unloading. Treatment and result as in Case 59.

71. S. S——, aged 68. Fracture like the preceding, left leg, May 1st, 1874. The broken internal malleolus had pierced the skin; caused by a fall on the pavement. Under treatment and doing well.

72. Double fracture of the left humerus, lower third; run over by a heavy coach August 23d, 1873. Mr. J——, aged 35; treated as Case No. 34, with excellent result, and motions as before the accident; splint removed in six weeks.

73. Simple fracture of the middle third of left ulna. D. N——, aged 12, October 3d, 1873, fell from a wagon. Treated successfully by a Bond's splint; removed in twenty days.

74. Mrs. B——, aged 56. December 2d, 1873. Simple fracture of the left ulna, treated as preceding; splint removed in five weeks; all the motions restored.

I have omitted a large number of other cases of fracture.

VII.

DISLOCATIONS OF THE SHOULDER, ELBOW, WRIST, AND PHALANGES.

By Lewis H. Willard, M.D., Alleghany, Pa.

Before entering upon the subject of the abovenamed dislocations, it would be well for us to consider for a short time the topographical anatomy of these joints. A thorough anatomist can readily detect a deformity immediately, this being due to his familiarity with the parts, acquired whilst at his interesting dissections. But to others who, away from the dissecting-room, scarcely ever see these joints unless some accident has befallen them, it is of the greatest importance that they not only familiarize themselves with the formations and prominences which surround articulations, but also seek opportunities for making observations and fixing in their minds the normal condition of the muscles and bones, so as to enable them to be more proficient in diagnosis, and thus prevent, in many instances, undue pain, when the case may be only a subluxation.

In looking at the shoulder-joint, we have, when the arm is by the side, the prominent deltoid, giving fulness to the shoulder, whilst the head of the humerus appears to give a slight fulness to the front view. Now raise the arm, and the deltoid, being in a contracted state, rises up and hides the acromion, whilst the fulness produced by the head of the humerus remains. This appearance of the deltoid and the globular form of the humerus is only seen in a normal state, or at least is so modified by accidents pertaining to this articulation as to cause us to suspect injury when the natural appearance is wanting. Mention is made of this, a partial description of the topography of the shoulder-

joint, so that attention may be drawn not only to the articulating surfaces when injured but also when in health.

The elbow-joint, with its varied movements, requires more attention, perhaps, than the shoulder. The rotation of the radius outward gives to some elbows in health a twisted and distorted appearance, which, unless observed closely, might lead us to suspect dislocation.

The wrist and fingers, uncovered and before our eyes, require no comment here; their every form and feature is sure to be known, and the slightest deformity is noticed with a quickness of perception so rapid as to make it apparent that the other articulations, if exposed as they are in some countries, would make my words useless, and we would have no plea for a more careful study of the superficial appearance of the body.

As my excuse for offering the above, I am prompted by my convictions to say that great mistakes are sometimes made in not knowing whether a dislocation is a dislocation, notwithstanding the many convincing symptoms.

DISLOCATIONS OF THE SHOULDER.

We will first examine the dislocations at the shoulder-joint. We find that from its prominent position, its shallow glenoid cavity, and the muscles which surround it, it is more liable to dislocation than any other joint. That portion protected by the acromion, the coracoid process, and the tense ligaments which hold the head of the bone when in a normal position, is afforded a partial barrier against displacement; but immediately below these prominences, and to either side, the joint is only protected by the capsular ligament and muscles; and when sufficient force, either direct or indirect, is applied, the head of the bone is forced against the capsular ligament and lacerates it, and escapes through the opening thus formed. All other joints have more protection, and are surrounded by bony ridges and those prominences which make dislocations less frequent, and hence reduction more difficult.

Malgaigne says that of 481 cases of dislocation, 321 were of the shoulder, or 1 to 9½, and of these a large majority were of the subcoracoid variety.

Varieties.—Notwithstanding the frequency of these disloca-

tions, their pathology seems to be imperfectly understood, as is shown by the great discrepancies of modern writers. The French surgeons have arrived at very different conclusions from the English and American, not only in regard to the situation of the head of the humerus, but in anatomical points which, from the description, we have reason to regard as correct; and hence, in speaking of the varieties, we shall adopt five different kinds, leaving out some of Malgaigne's for the sake of simplicity, and giving names derived from the relation of the head of the bone in its new situation to important osseous structures. Adopting this method, we have:

Subcoracoid.—Forward and slightly downward on the neck of the sacapula, in front of the glenoid fossa, and immediately below the coracoid process.

Subglenoid.—Downward and forward, the head of the bone in front of the inferior costa of scapula, below the glenoid fossa.

Subclavicular.—To the inner side of the coracoid process, under the clavicle.

Supracoracoid.—Upward and forward, upon the fractured coracoid process.

Subspinous.—Backward on the back of the neck of the scapula beneath the spine, on the posterior edge of the acromion.

There are other varieties frequently met with, intermediate between several of these forms, especially the first and second, but it is unnecessary to give them separately.

SUBCORACOID.—The first variety and most common of these dislocations is, we think, the subcoracoid. This includes the two varieties of Malgaigne, called respectively subcoracoid and intracoracoid, which we regard as subvarieties of one common form. Holmes says: "The main distinction between them seems to be this: in both cases the groove between the articular head of the humerus and the great tuberosity, rests in the same part of the anterior edge of the glenoid fossa. If the posterior scapular muscles are entire, being put on the stretch, they cause the head of the bone to be rotated outwards, and the subcoracoid variety is produced; if the injury has been inflicted by greater violence, and these muscles are separated from their attachments, or the greater tuberosity broken off, or if, perhaps, from some other

cause, their action is diminished, the humerus is allowed to turn more inward, and the greater part of its head is placed internal to a line falling from the tip of the coracoid process, the injury is called intracoracoid;" so that the name subcoracoid seems to be applicable to these two forms, and as such we shall regard it.

Mr. Flower says:* "Of forty-one cases of dislocation of the shoulder-joint seen in the museums of London hospitals, thirty-one were of the subcoracoid variety." And in fifty recent cases coming under the observation of Holmes, in forty-four the head of the humerus was placed so closely beneath the coracoid process as to justify the application of subcoracoid instead of axillary. By reference to the figures in the quarto edition of Sir A. Cooper's work, some of the representations, illustrating the downward dislocation, are in reality subcoracoid. I refer to these representations, one of which is found in Hamilton's *Treatise on Dislocations*, and by the position of the bone in its new situation, I think all will agree that it is of this variety, subcoracoid.

When we take into consideration the laceration of the ligaments, both anteriorly and inferiorly, with the tearing away or rupture of the long head of the biceps (such as our prominent writers say occur when the dislocation is subglenoid), what is there to prevent the coracobrachialis, deltoid, supraspinatus, and infraspinatus from drawing the head of the bone upwards?

As soon as the head of the bone is thrown from the socket, the spine of the scapula is so prominent that only in very rare cases will it remain under the glenoid cavity; it must go either forward or backward. When backward, it becomes subspinous; when under the glenoid cavity, subglenoid; when forward, subcoracoid. So soon as the head of the bone leaves the glenoid cavity, and is anterior to it, the supraspinatus and infraspinatus rotate it outward, and the tendon of the long head of the biceps, being torn from its attachment, has no power to keep the head of the humerus downward. By necessity, then, the deltoid, coracobrachialis, assisted by the infraspinatus and supraspinatus, draw it upward, and we have the common form of dislocation (subcoracoid).

* Transactions Pathological Society, vol. xii.

Now, should the contractile power of muscles bear no relation to dislocations, then I would have no objections to make in regard to the present classification; but we recognize at the present time that the chief obstacle to reduction is this contractile power; and that this power is great we have abundant evidence, for sometimes it is sufficient to lift a weight of several hundred pounds. Even in the dead subject this variety may be farther illustrated; for when dislocation is artificially produced by forcibly elevating the arm, whilst the scapula is fixed, the humerus will almost always be drawn up under the coracoid process. Again, in fractures of the neck of the humerus we find that the humerus is always drawn upward and forward, and as the contractile power of muscles in fracture is much less than in dislocation, what will be the result when a greater weight is added?

From the foregoing we class this variety (subcoracoid) as the typical form of dislocation of the shoulder, believing that almost all those dislocations called at present axillary or subglenoid have been of this variety, to which other names have been erroneously applied.

Causes.—From the exposed position of the bone, and the apparent weakness of the capsular ligament, where the bone makes its escape from the glenoid cavity, it may be inferred that direct blows upon the head of the humerus are the principal cause of the dislocation. Although Hamilton mentions eleven cases of dislocation produced by falling on the hand, and one by falling on the elbow, of forty cases investigated by Holmes, eighteen were caused by falls or blows upon the shoulder, five upon the elbow, ten upon the hand, and eleven were of doubtful character, including two from muscular action.

But aside from the causes already mentioned, that of prolonged muscular exertion, although not so frequent, does occasionally occur. The muscles being put upon the stretch for a continued length of time, when allowed to contract have not all the same contractile power, and thus by the paralyzed condition of some, and the undue contractility of others, the bone not having any bony prominence to support it, is drawn from its articular surface by muscular action alone. Cases of this kind are mentioned by Hamilton, Gross and others.

In Hamilton's cases, said to be axillary, mention is made of a Swiss woman, who was returning from the Jura Mountains with a load of hay upon her head. She had carried it a long way with her hands held upwards, without once stopping to rest, and when at length she threw down the load at her door, the right shoulder was dislocated; and dislocated most likely in the very act of throwing down her load, as these women, when doing so, throw their load off to the right, which would give the head of the humerus a forward motion, and the overstrained muscles, being too weak to prevent displacement, allowed the head of the bone to escape from its cavity, where, according to Hamilton's account, it had remained as it had been dislocated some seventeen years before he saw it. In another case, a sailor fell through a hatchway, and was caught and suspended by his arms, producing dislocation; and in still another, a woman slipping upon the ice grasped a pump handle, and the muscles giving way produced dislocation.

In the *American Journal of Medical Sciences*, 1828, vol. i, p. 242, Dr. Lehrman reports the case of a sailor, who was subject to a dislocation from very slight causes, especially if he bent his body over far to raise anything; he could also, by pulling horizontally, remove the head of the bone from its socket; it was easily reduced, and he experienced no pain either in the reduction or dislocation.

A patient presented himself at the Pittsburg Homœopathic Hospital the present year, for reduction of a dislocated shoulder. By a slight turn of the head of the bone forward and downward, the reduction was complete; when he told us it often got out of place, and in almost every case he could fix it right himself by merely pulling on something. He stated that it would occur whenever he threw his hand backward with the palm looking the same way.

*Pathology.**—The head of the humerus lies on the anterior surface of the neck of the scapula, immediately below the coracoid process, in front of, internal to, and rather lower than its normal situation. That part of the anatomical neck which sepa-

* Holmes, p. 813, vol. ii.

rates the articular surface from the great tuberosity, rests upon the anterior edge of the glenoid fossa. The subscapular muscle is raised from the neck of the scapula, and stretched over the front of, or above the head of the humerus.

The muscles from the back of the scapula (supraspinatus, infraspinatus, and teres minor) are drawn tightly across the glenoid fossa, or one or more of them may be ruptured, or detached from the bone. A portion, or the whole, of the greater tuberosity is frequently separated, when it may be drawn into the glenoid fossa by the action of the muscles inserted into it, or may be retained in connection with the humerus by the periosteum, or the capsular ligament. The long tendon of the biceps is rarely if ever injured. The muscles that descend from the coracoid process to the humerus are stretched by the projection of the head of the bone forward, and the great vessels and nerves are displaced inward. Lastly, the capsular ligament is lacerated more or less extensively, anteriorly and inferiorly, and the upper end of the humerus escapes through the aperture.

Symptoms.—The patient complains of pain about the joint, especially the inner part along the course of the great nerves of the brachial plexus, extending down the arm and sometimes to the fingers, with more or less numbness. Motion at the shoulder-joint is lost, but the movements of the forearm are not impaired. The arm is generally carried away from the body; motion can be made backwards with little pain, but motion inwards and forwards is almost impossible, owing to the head of the bone being under the coracoid process, and to the contraction of the muscles. Great pain is produced by attempting to place the elbow alongside the body; by doing so the head of the humerus presses upon the axillary plexus. A palpable depression exists under the acromion process. The acromion appears remarkably prominent, and beneath it there is a depression into which the fingers can be pressed, and in thin subjects before swelling has begun, the form of the glenoid fossa of the scapula can be distinguished through the fibres of the deltoid. The axis of the humerus is altered; instead of being directed to the glenoid fossa, it points to a spot internal, anterior to, and below it. The limb appears lengthened; but on carefully measuring from the acromion process to the ex-

ternal condyle, and comparing it with the sound side, we find it frequently equal or somewhat shorter.

Holmes observes that of forty-four cases of subcoracoid dislocation, the arm was elongated in nineteen, unaltered in eight, and shortened in seventeen; the greatest elongation being one inch, the greatest amount of shortening being the eighth of an inch.

Mr. Galloway, in his dissertation upon dislocations and fractures of the clavicle and shoulder-joint (1849), gives us as an important diagnostic sign, that measurement of the vertical circumference of the shoulder, by carrying a tape over the acromion and under the axilla, gives an increase of from one to two inches on the injured side. He considers this an important diagnostic sign, applicable to all forms of dislocation of the shoulder.

But it cannot be disputed, that the diagnostic sign of our countryman, Dr. Dugas, of Georgia, is more important than any of the signs already mentioned. It consists of the fact that the fingers of the injured limb cannot be placed either by the patient or surgeon upon the sound shoulder, while the elbow touches the front of the chest.

By taking the skeleton and placing the head of the humerus in the different positions it assumes when dislocated, the value of this important sign will be seen. It is very singular that in all the recent works of English authors, this valuable symptom still remains unnoticed.

Gross, of the axillary variety says, in addition to the above, "The most reliable diagnostic signs are the flattening of the deltoid muscle, the projection of the acromion process, the fulness and increased height of the axilla, and the separation of the elbow from the body, and the inability of the surgeon to approximate it to the middle line, without compelling the patient to depress the corresponding shoulder."

SUBGLENOID (OR AXILLARY).—We think this variety an unusual one, as may be inferred from what has already been said when speaking of the subcoracoid. Mr. Flower observes that he was unable to find more than two unreduced dislocations of this kind in the anatomical museums of London. In one of these, a new osseous socket had been formed for the head of the humerus

in the upper part of the anterior border of the inferior costa of the scapula, encroaching considerably upon the lower and the anterior part of the glenoid fossa. One of these has been illustrated by Sir A. Cooper, and has been spoken of in this paper. Its subsequent reproduction by other authors has contributed much to confirm the error of regarding this the usual form of dislocation of the shoulder. Mr. Flower concludes, from examination of specimens in museums and from recent cases, that not more than one in ten of all dislocations can properly be called subglenoid.

I would add in regard to one of these cases, that Hamilton, with the rest, has classed it as an axillary dislocation; it only needs a glance at the plate in his work on *Fractures and Dislocations*, page 552, to convince us that it is an error, as the new socket for the joint is fairly under the coracoid process, and not under the glenoid cavity.

Pathology.—The capsule of the joint is torn immediately below the glenoid cavity. The head of the humerus is generally found below the glenoid fossa, rather forwards and inwards, resting upon the inner border of the inferior costa of the scapula, and may be felt very plainly in the axilla.

The deltoid muscle is in a state of tension. The subscapularis is sometimes torn from its attachment, whilst the infraspinatus, supraspinatus, and coracobrachialis are, like the deltoid, very tense and stretched. The tendon of the long head of the biceps is sometimes torn from its attachment, but is oftener in a state of tension. This tendon, arising from the upper margin of the glenoid cavity, is continuous with the glenoid ligament, then arches over the head of the humerus, descends through the bicipital groove, and joins the short head about the middle of the arm. Thus by its origin and insertion, it has a tendency to keep the head of the humerus downwards, and consequently is not liable to rupture in this form of dislocation.

Symptoms.—The symptoms of this variety are very marked. There is a depression beneath the acromion. The head of the humerus is plainly felt in the axilla. The arm is farther away from the side than in the subcoracoid dislocation. Any motion of the arm gives great pain, in consequence of the head of the

bone pressing upon the axillary plexus. The arm is generally lengthened, but occasionally is unaltered in this respect, or it may be even shortened.

These variations, according to Callaway, may be accounted for partly by the uncertain position of the head of the humerus, which may be either upon the edge of the glenoid cavity or farther back in the subscapular fossa, and partly by the diminution of the distance between the acromion and the external condyle, dependent upon the projection of the elbow from the side. Measurement of the vertical circumference of the injured shoulder is greater by one or two inches than that of the sound one. In addition to these symptoms, there is the important one of Dr. Dugas, already mentioned.

The deformity is well marked. It consists in a depression at the insertion of the deltoid muscle, giving the arm a bent or broken appearance, and to make the deception more complete, sometimes the sufferer or an assistant supports the injured parts.

SUBCLAVICULAR.—As the name implies, the head of the bone is found under the clavicle, on the sternal side of the coracoid process.

Cause.—The cause is great violence, sufficient to force the head of the bone downwards under the coracoid process and inwards. When by the action of the deltoid muscle it is drawn up under the clavicle, it may be regarded as a rare variety, for the force sufficient to place it so far away from its articular cavity will, in most cases, be enough to produce fracture.

Many writers class the subcoracoid variety with this, but their names and locations show a distinction not easy to be mistaken.

Malgaigne describes one dislocation of this variety, when the head of the humerus was thrust between the deltoid and pectoralis major muscles, and was only covered in the interval by ligaments.

Pathology.—There seems to be very little known of the exact pathology of this dislocation.

Flower says that in his researches throughout the museums of London, he heard of one case in the St. Bartholomew Hospital Museum, in which the head of the humerus was said to have

rested upon the subclavicular fossa, and immediately below the clavicle. In two cases of unreduced dislocations, in another museum, in which the head of the bone is described in the catalogue as being under the clavicle, the new socket is distinctly seen to be immediately below the coracoid process. He further states, that he believes most of those so-called subclavicular dislocations which have been put upon the records, are of the subcoracoid variety, the subcoracoid not being recognized as the common variety, and any dislocation that was not subglenoid must be subclavicular. That these dislocations do take place there can be no doubt, but the accidents producing them are fortunately rare.

Symptoms.—Malgaigne gives as characteristic symptoms the following, viz.: The arm is pressed against the chest; it appears in some cases to be lengthened, in others shortened; the elbow is but slightly removed from the side, and points either directly outwards, or slightly backwards. The head of the humerus is felt on the inner side of the coracoid process, making usually a very apparent projection forwards. Sometimes it is by no means so conspicuous, but lies deeply in the subclavicular fossa. It approaches the clavicle in some cases so nearly as to touch it. In the axilla the shaft is felt, but not the head of the bone. Even when the arm is raised to a right angle with the body, the acromion stands out very prominently, and the depression beneath is more marked than in any other form of dislocation. The head of the bone readily obeys the movements of the limb, unless impacted in its position. The axillary plexus being uninjured, the pain is not severe.

Gross says, the prominent symptoms are the peculiar attitude of the limb, the extraordinary prominence of the acromion, and the position of the head of the bone just below the middle of the clavicle, where it can generally be both felt and seen.

SUPRACORACOID.—As the name implies, upwards and forwards upon the fractured coracoid process. This is a rare variety. It is *caused* by blows upon the under and outer side of the head of the humerus, lacerating the anterior portion of the capsular ligament, and with the same force breaking the coracoid process.

The head of the humerus rests beneath the integument, between the fibres of the deltoid muscle.

Pathology.—Malgaigne, who gives and describes this variety, seems to have had only one case. In this single case the head of the humerus appeared to be dislocated upward and forward, and rested upon the coraco-acromial ligament, touching externally the inner border of the acromion, and internally the coracoid process, which it covered, and projecting inside and raising the deltoid muscle.

In the *Medico-Chirurg. Trans.*, vol. xii, page 447, Holmes has published an account of the dissection of a case where the coracoid process being fractured, the head of the bone rested on its stump, and on the clavicle, fairly out of, above, and a little anterior to the glenoid fossa, and, having passed through the fibres of the deltoid muscle, was only covered by the integument. The long tendon of the biceps was displaced to the outer side of the head of the bone.

Symptoms.—The head of the bone is prominent in front above the coracoid process, and internal to the acromion. The arm is shortened, and stands out slightly from the side; the movements of the limb are impaired; the head of the bone is plainly felt beneath the integument; the vertical circumference of the axillary region increased. In addition to these the diagnostic sign of Dr. Dugas will not fail to reveal the true state of the limb, and aside from these few symptoms, the nature of the accident is so apparent as to be unmistakable, and the reduction, from the nature of the dislocation, made comparatively easy.

SUBSPINOUS.—This variety is not so rare as the last mentioned, but still is of uncommon occurrence, as is shown by the fact that in Guy's Hospital (London), only two cases have been recorded in thirty-eight years. Out of 159 cases at the Middlesex Hospital, only three were of this variety. Hamilton mentions one case in his practice. Another is recorded by Dr. Physick, in 1811, which is one of the earliest on record. In fact it is only within a very short time that this dislocation has been recognized as a distinct variety.

Causes.—Of the cases mentioned as being recorded at Guy's Hospital, under the supervision of Sir A. Cooper, in one the

shoulder was disloçated backwards in epileptic convulsions, and in one the man had fallen upon his shoulder.

Hamilton's patient had his arm caught in machinery. Desclaux mentions a patient of his, whose arm was dislocated backwards by falling from a height with his arms in front of him. Dr. Parker, of New York, mentions the case of a woman, æt. 60, who had fallen forwards and struck upon the outside of her elbow, arm, and shoulder. These dislocations seemed to be produced by falls upon the palm of the hand, with the head of the humerus looking backwards.

Pathology.—An interesting case observed by Sir A. Cooper, illustrates the pathology, and I here append it. It was the case of Mr. Complin, and is recorded at Guy's Hospital. I transcribe from Hamilton: "This gentleman was fifty-two years of age, and subject to epileptic fits, in one of which the shoulder was dislocated backwards. Many attempts were made to reduce it, but although it seemed to be easily drawn into its socket by extension merely, yet as soon as the force ceased, the head of the bone slipped back upon the dorsum of the scapula, and in this situation it was permitted to remain until his death, which did not take place until five years afterwards. In the meantime he was able to move the limb but very slightly, so that his arm was almost useless.

"Mr. Cooper, to whom the arm was sent after death, found the head of the bone resting upon the spine of the scapula, and against the posterior edge of the glenoid fossa, where it had formed a slight depression, and the head itself had become somewhat changed in form by absorption. The tendon of the subscapularis muscle and the internal portion of the capsular ligament were torn at the point where the muscle was inserted, but the greater part of the capsular ligament remained, having been pressed back of the head of the bone. The supraspinatus was stretched, while the infraspinatus and teres minor were relaxed. The long head of the biceps was elongated, but not ruptured. The glenoid fossa was rough and irregular upon its surface, the cartilage having been absorbed.

"It is obvious that the reason of the bone not remaining in place when reduced was owing to the rupture of the subscapular

muscle, and the contraction of the infraspinatus and supraspinatus, which drew the head of the humerus into its abnormal position."

Symptoms.—The symptoms vary according to the amount of displacement, being more marked and prominent the farther the head of the humerus is removed from the glenoid cavity.

There is a marked prominence under the spine of the scapula, with a corresponding depression in front, and to the outer side of the acromion. The fingers may be deeply pushed into the cavity between the head of the bone and the coracoid process; the axis of the arm is upwards and outwards, with the elbow projecting anteriorly.

Hamilton says, "The head of the bone is obedient to the movements of the arm;" while Gross says, "Supination is impossible, and all attempts at motion are productive of an unusual degree of pain and distress." Evidently this disagreement of opinion is owing to the degree of displacement.

Desclaux's patient held his hand upon his head, with his arm horizontally across his body.

Diagnosis.—From the position of the head of the bone, and the axis of the same, it seems that the diagnosis should be easy; but Sir A. Cooper relates a case where the accident was not discovered by the surgeon on the day of its occurrence, and on the seventeenth day Bransby Cooper failed to make the diagnosis; while on the twenty-third day Sir A. Cooper failed to determine the nature of the accident, until he unexpectedly reduced it whilst manipulating the arm.

In another example the same surgeon believed the accident to be a fracture, but a more careful examination showed it to be a dislocation backwards. In this case the arm could not be rotated outwards, as the subscapularis was not torn, and continued to offer resistance when the arm was moved in this direction.

Prognosis.—The prognosis will be made in this variety the same as in all others, depending upon the amount of injury done to nerves, muscles, and tendons.

In the case of Mr. Collinson, the patient recovered the use of the arm in about a month. It was reduced on the second day. Dr. Parker's patient had nearly recovered the use of the arm at

the end of four weeks, although it was not reduced until it had been out of place two weeks. A case is recorded by a surgeon who succeeded in reducing the dislocation after it had existed one year and fifteen days. Sepillitrin reports another that was reduced forty-five days after its occurrence.

General Prognosis.—The prognosis of these dislocations may, for purposes of convenience, be considered together, although in some of the early reduced dislocations, which to all appearances have apparently inflicted no injury to nerve, viscera, or muscle, the after-consequences have been severe, and hence the prognosis, in regard to the future usefulness of the limb, will of necessity be guarded. Should the diagnosis be made correctly, and the dislocation reduced at an early date, the prognosis will be favorable. The length of time the bone remains unreduced, not only renders the reduction difficult, but in some cases impossible, owing to the rapid effusion of plastic material which an inflamed joint throws out; and the solidifying of this same substance with the healthy structures, make accidents probable from the tearing of some large vessels or nerves in the attempts at reduction.

Hamilton* says: "It cannot, however, always be inferred from the degree of violence employed in the production of the dislocation, nor from the absence or presence of swelling, how much injury the tendons, muscles, and nerves have suffered, since the same causes produce greater lesions in one person than in another, and the amount of swelling may depend upon the accidental rupture of an unimportant bloodvessel, or upon some peculiarity of the constitution of the patient predisposing to serous, fibrous, or sanguineous effusions.

"To whatever cause we may find occasion to attribute the result, it will nevertheless be observed that, in a great majority of cases, the limb is not restored to its original strength and freedom of motion until after the lapse of some months; and the shoulder does not resume its perfect form and symmetry until a much later period; occasional pains, especially after exercise of the muscles, and in certain conditions of the weather, are present also at irregular intervals and for indefinite periods of time.

* Hamilton on Dislocations and Fractures, p. 548.

Opposite and more favorable terminations must be regarded as exceptions to this rule."

The muscular paralysis seems to be of an unavoidable nature, and is generally but a question of time.

Of the many cases reduced at the Pittsburg Homœopathic Hospital, as yet none have been under treatment longer than a month. This we attribute to the use of an anæsthetic, used to such a degree that all the muscular system is flaccid, and hence no severe injury is done to the muscles and tendons. In addition to this, all the cases were reduced by manipulation alone. The pulling and straining of muscles, with their accompanying paralyzed condition, is due mostly to the great force which is exerted by the various ropes and pulleys.

I think we may consider that our prognosis, aside from the injuries inflicted when the accident occurred, may be formed from the amount of force used in reduction. Almost all cases cited by different authors as being slow in recovery have been those where force was used.

In regard to the length of time dislocations of the shoulder are reducible, that will depend upon the amount of arthritic inflammation. Should there have been but little, reduction can be accomplished after many months.

Treatment.—In treating these dislocations, and before an anæsthetic is used, a few simple manipulations while the patient's mind is diverted may result in the reduction; but these manipulations should not be made if they produce pain, as we think that whilst our patient is under the influence of an anæsthetic there is less danger to the structures around the joint, and consequently, by anæsthesia, we avoid arthritic inflammation. Of course we must consider the action of the heart and other organs in relation to the anæsthesia.

The treatment best adapted to the stage before we are compelled to use the anæsthetic, may be as follows:* The patient, seated on a chair, may be led to believe that the examination is going on, so that no extraordinary effort of resistance on his part takes place; for, if he is prepared for what he believes must be a

* Holmes's Surgery, vol. ii, page 824.

serious operation, the muscles are often involuntarily rendered tense. The surgeon, standing behind or before the patient, as is most convenient, places his left hand upon the shoulder to steady it, and with the other, grasping the arm a little above the elbow (which should be flexed, in order to relax the biceps), raises it rather above the horizontal line, giving it a slight rotatory motion inwards, combined with moderate extension; at the same time, with the fingers or thumb placed upon the shoulder, the head of the bone may be pressed backwards and upwards into the glenoid cavity.

In the treatment of the subcoracoid variety, the reduction by manipulation does not differ materially from that described by Dr. H. H. Smith for the axillary. Should, however, the head of the bone be close up under the coracoid process, a slight extension had better be made before raising the elbow; otherwise, the various manipulations are the same. Hence, in considering the treatment, we select these two varieties as the type which will guide us in all dislocations of the shoulder.

The old-fashioned methods of reducing these dislocations, although used in some cases, are rapidly going out of favor, the chief obstacle to the reduction being, as is now recognized, due to the contracted state of the muscles, and not, as was formerly thought, to the long bony prominences and tuberosities.

Although we claim that reduction by manipulation is of recent date, there is no doubt but that Hippocrates practiced it to some extent, such as by raising the arm to a horizontal position, and then using force.

In 1833, Sir Philip Crampton wrote a series of papers, which were published in the *Dublin Medical Journal*, advocating reduction by manipulation, and giving rules for its performance. In the luxation downwards he made gentle extension at the wrist, to secure a long lever, and then slowly raised the limb to nearly a horizontal position, so as to relax the flexor and extensor muscles. He then suddenly pushed the arm upwards and a little forwards, towards the patient's face, or, in other words, rotated it inwards with the hand turned prone, and at the same instant forced the trunk suddenly backwards, with the left hand placed below the axilla.

In luxations forwards, "The surgeon," says Crampton, "should place his left arm, extended horizontally, immediately below the walls of the axilla, between the dislocated arm and the chest, and then, grasping the wrist in his right hand, he should draw the arm forcibly across the patient's body."

In 1861, Prof. H. H. Smith, in the *Philadelphia Medical and Surgical Reporter* for February, gave a valuable description of this process, and as it is the same process as is practiced at present, I shall quote the author's words. But before entering upon the manipulation it is necessary, for causes already mentioned, to fully etherize your patient, as in all reductions a relaxed condition of the muscular system is not only necessary for reduction, but also for diagnosis.

Dr. Smith gives us, in his preface to the manipulation, the chief obstacles to reduction, and says the muscles to be considered are the supraspinatus, infraspinatus, teres minor, subscapularis, and deltoid. Bearing in mind the origin and insertion of the abovementioned muscles, we find that the supraspinatus raises the arm and rotates it outward, so that, by elevating the humerus and rotating the head of the bone outwards by means of the forearm, we relax this muscle, and remove the main obstacle to the reduction of this dislocation; for we then have the anatomical head of the humerus just on the narrow ledge which is part of the glenoid cavity. The infraspinatus will be relaxed when the bone, in addition to the above manipulation, is rotated backwards; the teres minor and deltoid will be relaxed by the same movements in axillary dislocations; but in those occurring either anteriorly or posteriorly, the arm must be held differently. The subscapular muscle, when the arm is held in the horizontal position and the head of the bone is rotated outwards, is made tense by binding against the neck of the bone; hence the resistance or limit to external rotation, which is relieved by bringing the arm down to the side and rotating the head of the bone forwards and inwards. The muscles mentioned are more or less stretched in all luxations of this joint, and hold the humerus in its false position, so that when we relax them and properly rotate the humerus, we can easily pass the head of the bone through the

rent made when it was forced from its articular cavity. The following manipulations make the subject clear.

1st. Elevate the humerus so that it may form a right angle with the body, and flex the forearm to a right angle with the arm, so that the palm of the patient's hand will present to his abdomen.

2d. Seize the wrist with one hand and the surgical neck of the humerus with the other, then whilst the arm is elevated and the forearm flexed, use the forearm as a lever, and rotate the head of the humerus upwards, outwards, and until the patient's hand looks upwards, and a strong resistance to further rotation, caused by the tendon of the subscapular muscle, is felt.

3d. Now bring the elbow slowly to the side, keeping the humerus parallel with the middle line of the axilla (that is, do not carry the arm to either the anterior or posterior portion of the trunk), rotate the head of the humerus upwards and forwards, by reversing the motion of the forearm, until the palm of the hand shall again look downwards, bringing the elbow to the side during the latter rotation, and the head of the bone glides into its proper place.*

In the anterior luxation, elevate the elbow as much as possible, and carry it toward the head of the patient, keeping the arm on the line of the body, when the head of the humerus will readily slip into the axilla. In a posterior luxation, elevate the elbow, and carry it forward so as to free the head of the humerus from the head of the scapula, so as to throw it into the axilla, as has long been practiced.†

In the subcoracoid variety, most success will be found if the surgeon stands back of the patient, for then, when the arm is raised and the head of the humerus rotated, it will be found on the edge of the glenoid cavity.

In the axillary variety, when the head of the humerus is fairly in the axilla, the plan practiced by Mr. White of Manchester, or still later by La Mothe, is to suspend the patient by the dislocated arm, and in this way the contracted muscles be-

* Willard, Hahnemannian Monthly, vol. i, p. 281.

† Franklin, vol. ii, p. 274.

coming tired, relax, and the bone slips into the glenoid cavity. It has been supposed that counter-extension could be made in the axilla against the inferior margin of the scapula, but several obstacles are presented to the successful application of force at this point. In the contrivance of placing first a ball of yarn in the axilla, and upon this the heel of the operator, it will be found exceedingly difficult to enter the axilla without at the same time pressing with considerable force against its muscular margin; and to press upon the pectoralis major and latissimus dorsi is to neutralize our own efforts. If, however, the heel or the ball does press fairly into the axilla, it will not find the scapula readily, but it must impinge first upon the head of the humerus, which is always a little to the inner side of the scapula. If it ever is made to reach actually the inferior border of the scapula, and I do not think it is, its effect must be only to tilt the scapula upon itself by throwing back its lower angle, and not to separate the glenoid cavity or its upper and anterior margin from the head of the humerus.

In regard to the extending force, there is published in the *Medical and Surgical Reporter* for May 9th, 1874, a case of axillary dislocation, which from its nature and the method of reduction, illustrates that a true axillary dislocation is rare. The case is reported by Dr. Allis, of Philadelphia, as follows:

"A. C., aged thirty-two; thin and spare. In a scuffle with a drunken man, both fell to the sidewalk. In the fall Mr. C.'s left shoulder struck the elevated edge of the curbstone, and the weight of both was sufficient to drive the head of the humerus into the axilla. I saw him a few moments after the accident, and his attitude alone was sufficient to suggest the nature of the injury. I found an attendant supporting and extending the arm, as in this position he had comparative ease. On stripping the part, and requesting him to stand erect, the arm stood off from the body, and exhibited a feature first mentioned to me by Dr. Dingee, viz., that of fracture of the upper third of the humerus. The deformity consists in a marked depression at the insertion of the deltoid, giving the arm a bent or broken appearance, and to make the deception more complete the sufferer or an assistant supports the injured parts. The other prominent

symptoms were prominence of the acromion, flattening of the deltoid, with a horizontal depression just below its broad origin, the head of the bone felt below the glenoid cavity, and inability to bring the arm to the side, which readily established the nature of the injury.

"Placing the patient on the floor, I first attempted the reduction with my left heel in the axilla. Failing in this, and with my foot in the axilla, and still extending the arm, I worked myself around until I could place my right foot upon the acromion process. Thinking that the reduction might have been accomplished by this manœuvre, though no audible sound had announced it, I cautiously worked myself to his side, still maintaining the extension, and keeping my foot in the axilla, and was pleased to find the success complete."

The reduction of these dislocations, either subcoracoid or axillary, do not owe their efficacy to the counter-extending force, to the heel or any substance in the axilla, but merely to their being a sort of wedge or fulcrum upon which the humerus acts as a lever, which forces the head of the bone outwards and upwards into the glenoid cavity. At the same time, it is evidently necessary that the scapula must be fixed when extension is used, otherwise the reduction is more difficult. Dr. Physick had an assistant to hold the scapula with the palm of his hand.*

English surgeons generally adopt this method, and do not seem to place as much confidence in reduction by manipulation as we do. Flower, an English writer, makes some pertinent remarks on the reduction by extension, and says: "Nearly all surgeons who have approached the subject scientifically, have agreed, both from reasoning and experiment, that the direction which most favors reduction of the humerus, both by obviating mechanical obstacles, and by relaxing the tension of the numerous muscles that pass to it from the scapula, is one in the axis of the glenoid fossa, which line, if prolonged backwards, is nearly coincident with the lower border of the spine of the scapula. In all the most successful methods of reduction the traction is in reality exercised more or less in this line, although,

* American Journal Med. Science, Feb., 1837.

if the scapula is regarded as a fixed instead of a movable point, it may seem otherwise."

Sir Astley Cooper's method differs from that practiced by White, La Mothe, and others, or rather they differ from him. His method is one of the oldest, and more suited to those dislocations of a pure subcoracoid variety, when the heel, by making counter-extension in the axilla, enables the operator to bring the head of the bone from under the coracoid process, and thus replace it. He thus describes his method:

"The patient should be placed in the recumbent posture upon a table or sofa, near the edge of which he is to be brought; the surgeon then binds a wetted roller around the arm immediately above the elbow, upon which he ties a handkerchief; then he separates the patient's elbow from the side, and, with one foot resting upon the floor, he places the heel of his other foot in the axilla, receiving the head of the os humeri upon it, whilst he is himself in the sitting posture by the patient's side. He then draws the arm by means of the handkerchief, steadily, for three or four minutes, when, under common circumstances, the head of the bone is easily replaced; but if more force be required, the handkerchief may be changed for a towel, by which several persons may pull, the surgeon's heel still remaining in the axilla. I generally bend the forearm nearly at right angles with the os humeri, because it relaxes the biceps and consequently diminishes its resistance."* Sometimes, instead of the heel, he uses the knee, and fixes the scapula with his hand.

Skey says Dupuytren adopted the plan of White, but ascribed the invention of it to his countryman, La Mothe.

He discards manipulation as practiced by American surgeons, and adopts as most worthy that plan of Sir A. Cooper and Mr. White. With Sir A. Cooper he disagrees, inasmuch as the scapula is left free. He says, by fixing the scapula we retain the glenoid cavity in a direction looking straight outwards from the trunk, but if we leave the scapula untouched, then by the act of drawing down the humerus we depress at the same time the acromion by means of the deltoid, which is attached to both.

* Hamilton, p. 559.

The consequence is, that in depressing the acromion we direct the socket of the bone towards the dislocated head, and readily get rid of the obstacle, which is often immediately caused by the rim of the glenoid cavity alone, and we bring the two surfaces of bone within range of what I may term their natural affinity, by the agency of which they immediately coalesce. He says: "With the bone in the axilla, the scapula is made to revolve on its centre, through the leverage exercised on the acromion by the deltoid; and the pectoralis major and latissimus dorsi, being relaxed, exercise no prejudicial influence on the movements of the humerus." Skey's method is as follows, as described by himself:

"There is no reason why, in very muscular subjects, or in old dislocations, the same principle may not be applied conjointly with the use of pulleys. For the purpose of retaining this admirable, because most efficient principle, I employ a well-padded iron knob, which may represent the heel, from which there extend, laterally, two strong straight branches of the same metal, each ending in a bulb or ring of about four inches in length, the office of which is designed to keep the margins of the axilla as free from pressure as possible. The iron knob is to be pressed well up in the axilla and attached to cords fastened to a staple, the patient lying upon his back or inclined a little to the opposite side. The arm is then to be drawn downwards by the pulleys, as nearly as possible parallel to and in contact with the body."

DISLOCATIONS OF THE ELBOW.

In the beginning of this paper, attention was called to the topography of the elbow-joint, and again we would revert to it; for of this joint it is of the greatest importance that we fully understand its complicated nature; and hence every surgeon should occasionally look at the skeleton in his office, so as to thoroughly familiarize himself with the projecting processes of the joint and the various movements of the radius. By so doing, it will enable him to diagnose his cases with a certainty only acquired by constant study and observation.

Skey says: "The humerus terminates below in its two con-

dyles, of which the internal one projects considerably. The ulna embraces its articular surface by means of a considerable concavity, terminating in front in the coronoid process, which, in extreme flexion of the arm, is received into the anterior depression of the humerus, and behind in the olecranon, which, in extension, falls into the posterior and larger depression of the bone. The head of the radius revolves on the articular surface of the outer condyle, and also in the lesser sigmoid cavity of the ulna. It is distinctly felt in rotation on pressure of the finger, applied a good way back, immediately below the outer condyle. Of these processes, the coronoid, the outer condyle, and the head of the radius, are closely invested with muscles. The internal condyle and olecranon are prominent.

"The front of the joint is covered by the brachialis anticus, by the tendon of the biceps, and its aponeurotic expansion, which is lost below in the fascia of the forearm, by the brachial artery and median nerve. The large mass of muscles on the outer side, covering the condyle and the head of the radius, consists of the supinators and extensors, which, for the most part, arise above from the humerus. That of the flexors takes its origin from the internal condyle only."

Causes.—The causes of dislocations of this joint may be considered together, being mostly produced by falls upon the hand or forearm; but so quickly and instantaneously do they happen, that the patient can scarcely ever give a satisfactory account of how the accident occurred, so that we form our opinion from the nature of the derangement the elbow has sustained.

Diagnosis.—Frequently complicated with fracture, the diagnosis is still oftener made more perplexing by ecchymoses and other swellings, which sometimes totally obscure the articulation. Skey says that under almost all circumstances two parts are visible, viz., the internal condyle and the olecranon; but I must differ in this respect from this distinguished writer, for in the cases which have come under my observation these parts could only be felt by hard continued pressure; however, on these points we place our main reliance for diagnosis, and if they are not readily distinguished, firm pressure will assure us of their position. The relation of these two points should be well under-

stood and fixed in our minds, for by them, in cases of injury, our diagnosis is somewhat simplified.

In the extended position of the arm, the centre of the olecranon is about an inch underneath the condyle, in the vertical direction; and when the arm is bent at a right angle, the olecranon is in a right line with the condyle, and about an inch and a half below it. It has already been stated that great swelling will sometimes take place within a short time after the accident, so formidable as to totally obscure the form of the joint; but by the aid of our anatomical knowledge, or the relation of one part with another, these points are readily distinguishable, and will serve as landmarks to guide us in our diagnosis.

It may be that this swelling which we often meet with is of such magnitude, that a correct diagnosis is rendered impossible by the tenderness of the part and the nature of the accident. Under such circumstances, I would add, by way of warning, state the nature of the difficulty to the patient or his friends, and ask for additional counsel before proceeding further in the case, and then after etherizing the patient make your diagnosis. For, unhappily for the profession, the records abound with cases of malpractice concerning the elbow-joint, more numerous than of all the rest combined. This is owing to the complicated nature of the joint. The desire of the surgeon to be alone in the treatment of the case, and sometimes through ignorance and neglect, or a desire to put off and see what nature will do, leads to a compulsory retribution as the reward for all his services. But in cases where knowledge and foresight are set at naught, no surgeon can be held responsible if he makes a plain avowal of the difficulty encountered, and does not assume a responsibility or give a pledge to restore the joint to its normal condition. The difficulty here is obviated by having others to share the responsibility. No one will feel this more painfully than when placed in a critical position; and not until then will they so truly understand the old adage, that "*In union there is strength.*"

We will first consider that form of dislocation of the elbow in which both bones are thrown backwards, resting on the posterior surface of the humerus; which is considered the most common form.

Causes.—Generally, in consequence of falls upon the palm of the hand, the person instinctively putting out his hand to save himself, with the forearm flexed; the weight of the humerus coming with the body, they meet at the joint, the ligaments give way, and the radius and ulna are forced backwards and upwards.

Symptoms.—There is a marked prominence back of the joint, caused by the olecranon, and on placing the fingers upon the condyles of the humerus, and upon the olecranon, the difficulty will be readily distinguished. The arm is shortened and mostly in a semiflexed condition, and slightly twisted midway between pronation and supination. Any attempt to flex or extend the forearm produces pain.

If called immediately after the accident, the muscles in front of the arm will be found in a stretched condition. This is very seldom the case, as swelling sometimes will follow in an hour or less, so as to make these tense muscles not readily distinguishable. Then for diagnosis we must compare other symptoms, and find that in fractures of the humerus at the condyles, there will be almost the same appearance back of the joint, but by extending the arm and rotating we will find crepitus, and the arm will be restored to its proper length.

Fractures of the olecranon can be distinguished by the wide gap between the upper and lower fragments, and the ease with which the length of the arm can be restored. Franklin says that an important sign to be taken into consideration is seen in the fact, that by flexing the forearm in luxation, the prominence produced by the olecranon is increased, while extension tends to diminish it, exactly the reverse of what occurs in fracture; and again, if a circular line be drawn around the joint through the condyles of the humerus, it will not cut the point of the olecranon, as in a normal condition.

I would also add Skey's anatomical points, the internal condyle, and the olecranon as already described.

Reduction.—Most authorities agree that the reduction is easy if attempted promptly after the accident. But should time elapse before reduction is attempted, the rapid effusion and the peculiar formation of the joint seem to produce barriers which make a delay of even one to two weeks dangerous, and oftentimes impos-

sible. Gross's plan is to place the heel in the bend of the arm, the patient lying down, and the surgeon carrying his leg across the chest, while extension is made by pulling the hand and wrist. As the bones yield, the forearm is bent toward the chest over the fulcrum furnished by the foot, a step which materially promotes the reduction. The force of the extension may be greatly increased by securing a stout loop round the limb, just above the wrist, and throwing the noose over the neck and shoulder. Counter-pressure may also be advantageously made by an assistant placing his hands against the shoulder of the affected side. The patient should, of course, be under the influence of chloroform.

Sir A. Cooper's method is as follows: "The patient is made to sit upon a chair, and the surgeon, placing his knee on the inner side of the elbow in the bend of the arm, takes hold of the patient's wrist and bends the arm. At the same time he presses on the radius and ulna with his knee, so as to separate them from the os humeri, and thus the coronoid process is thrown from the posterior fossa of the humerus; and whilst this pressure is supported by the knee, the arm is to be forcibly but slowly bent, and the reduction is soon effected."

Another method has been recommended by Liston and others, which consists in seating the patient upon a chair, and then drawing the arm and forearm directly backwards, thus relaxing the triceps muscle, counter-extension being made against the scapula.

The above plans are for simple dislocation without fracture. But where the dislocation is complicated with fracture of the humerus, that of Skey has been most serviceable in my hands. A case treated at the Pittsburg Homœopathic Hospital will illustrate the manner of procedure.

Alexander D., æt. 52 years, fell from a cart, fracturing the femur, the left humerus at about the middle third, and dislocating the radius and ulna of the same arm backwards. Assisted by Drs. Seip, Caruthers, and Chantler, we first reduced the fractured humerus and bound the splints firmly. Then whilst the arm was held by one person firmly at the seat of fracture, just below the insertion of the deltoid, another made extension in a

downward direction at the wrist, and at the same time slightly flexed the arm, whilst another with his thumbs upon the olecranon, forced the bones into position.

Skey says: "If we examine the construction of the joint on the skeleton, it appears obvious that simple extension will accomplish everything; that it presents the readiest mode of detaching the coronoid process from the posterior fossa, or from the posterior surface of the humerus, supposing it to be forced beyond the fossa into extreme retraction; that it employs equal and fair tension both on the biceps and brachialis anticus in front, and on the triceps behind; that all that is required for success is to bring the coronoid process below the trochlea or pulley of the humerus—for the radius presents little or no obstacle—when it will rush forward to its natural surface, and the dislocation is reduced. Unless the patient be a very powerful man, the reduction of the forearm on this principle may be effected by two or three persons, one of whom should fix the arm, or simply retain the person of the patient in position. Extension of the forearm should be made from the hand or wrist, in a straight direction downwards, as if for the purpose of simply elongating the arm. This extension should be continued with moderate force for some three or four minutes, when the bones will slip forwards, without great effort or difficulty."

The other forms of dislocation of this joint are rare, and as I fear the paper would be carried out to an unusual length were we to consider them fully, shall give only a short synopsis of the remainder.

DISLOCATION FORWARD.—In dislocation of the ulna and radius forwards, much doubt exists as to its occurrence without more or less injury to the bones around the joint. Sir A. Cooper, Vidal, and others, adhere to this opinion; but Monin, Prior, Velpeau, Canton, and Denüce have each reported one example without fracture. But notwithstanding these cases, the *cause* necessary to produce such a displacement must have been powerful. In Velpeau's case, the man, Alex. Cavilla, æt. 23 years, was knocked down by a carriage on the 1st of July, 1848, the wheels passing over the right arm. The arm was found in a right-angled position, and it could neither be flexed nor extended; the forearm was

strongly supinated, and the projecting angle usually made by the olecranon process was replaced by the irregular extremity of the humerus; the forearm was shortened upon the arm; the head of the radius was resting in the coronoid fossa, the olecranon process being also carried upwards and a little forwards. Reduction was easily accomplished, and the patient left on the nineteenth day, with only a slight stiffness of the joint remaining.*

Symptoms.—The forearm is shortened, if the ulna and radius are thrown in front of the condyles, but elongated when they retain their relation to the condyles. The forearm is slightly flexed, but may be readily extended, or even bent somewhat backwards; the end of the humerus can easily be felt posteriorly, where it forms a large prominence, and there is a well-marked depression, a kind of vertical gutter, in the natural position of the olecranon, bounded on each side by the margins of the trochlea.

Reduction.—Reduction may be accomplished by violent flexion of the arm, while at the same time the heel is applied as a fulcrum to the lower third of the arm; or, instead of using the heel, have an assistant make counter-extension about three inches from the bend of the elbow on the humerus, at the time violent flexion is made.

Instead of the above plan, we can adopt the universal method of Skey's, and make extension and counter-extension, at the same time moulding or pressing the bones to their places by the thumbs.

LATERAL DISLOCATIONS, RADIUS AND ULNA OUTWARD.—The majority of outward dislocations of the forearm are incomplete; indeed, only nine examples of a complete dislocation have been collected by Denüce, including two seen by himself. Malgaigne has since added two more, making in all eleven cases. All these examples have occurred in the practice of French surgeons. So far as I am able to discover, no English or American surgeon has ever reported a single example.†

The cause, judging from the result, must be from blows received upon the inner side of the forearm, or upon the outer

* Hamilton, p. 608. † Ibid., p. 601.

side of the humerus. Occasionally it has been caused by a fall upon the hand with the arm twisted.

Pathology.—When the cases are simple, and not rendered complex by the violent nature of the blow, the great sigmoid cavity of the ulna still embraces the lower end of the humerus; but instead of reposing upon the trochlea, it is carried outwards half an inch or more, so as to rest its central crest upon the trochlea; but if the annular ligament remains unbroken, the radius is displaced in the same direction and to the same extent, its head resting against and directly below the epicondyle. If, however, the violence has been great, the central crest of the great sigmoid cavity rests fairly upon the condyle, or upon the articulating surface of the humerus, where the head of the radius was formerly applied, and the dislocation approaches more nearly the character of complete luxation, and the annular ligament is broken. Such are the views of Hamilton upon the pathology of these cases.

Denüce, Malgaigne, and Sir A. Cooper prefer to give a distinct name for this dislocation where the bones are thrown completely to the outside, and call it backwards and outwards.

Symptoms.—The inner condyle forms a sharp prominence on the inside of the elbow; the forearm is slightly bent and rigidly pronated; the motions of flexion and extension are much impeded, and the flexor and extensor muscles are in a powerful state of tension; there is a remarkable increase in the breadth of the joint, with considerable flattening of its anterior surface, and with a twisted condition of the forearm.

Reduction.—When the diagnosis is made with certainty the reduction is easy, and consists of extension and counter-extension, with coaptation of the bones by the hands; or by extension and counter-extension, at the same time bringing the arm over the knee.

RADIUS AND ULNA INWARDS.—This variety is still more rare than the preceding one, and although a few cases are recorded, some think there has never occurred a complete dislocation of this nature. Gross mentions one as related by Nelaton in his *Treatise on Surgery*. It was observed in a man æt. 60, who was admitted to the hospital for another disorder. The accident hav-

ing taken place twenty years previously in consequence of a fall from a height of thirty feet. The elbow was deformed and anchylosed.

Pathology.—The ridge which divides antero-posteriorly the greater sigmoid cavity of the ulna, having been driven over the elevated inner margin of the trochlea, falls down upon the epitrochlea, so as, in some sense, to embrace it instead of the trochlea, while the head of the radius passes inwards also, and is made to occupy the trochlea from which the ulna has escaped.*

Symptoms.—There is great deformity at the ulnar side of the elbow, formed by the olecranon and head of the radius, the latter being placed against the inner condyle, whilst the outer condyle presents an unusual prominence immediately beneath the integument at the internal aspect of the joint; the forearm is particularly bent and somewhat supinated. The muscles of the arm, both in front and behind, are dragged inwards by the displaced bones.

Reduction.—The same as the preceding variety. But perhaps the plan adopted by Velpeau will illustrate it better. His case is related by Denüce, and is as follows:

On the 10th of May, 1848, Alexandrine Guyot, æt. 22, entered the hospital of La Charité with an incomplete inward dislocation of the forearm, which had just occurred. The hand and forearm were in a state of forced pronation, half flexed, and the whole limb, from the elbow downwards, was deflected inwards. There were present also all the other usual signs of this dislocation, and Velpeau had no doubt as to its true character. In order to accomplish reduction, one assistant made counter-extension upon the arm, while a second made direct extension upon the forearm. At first the traction was made in the direction of the forearm (flexed and prone), but gradually the arm was straightened and supinated. Then the surgeon, seizing with one hand the superior extremity of the arm, acted forcibly upon the two portions in opposite directions, and immediately the reduction was effected with a noise.

* Hamilton, p. 606.

DISLOCATION OF THE ULNA BACKWARDS.—This form of dislocation is said rarely if ever to occur unless accompanied by fracture of the coronoid process; and by examining the skeleton it is natural to suppose that the circumstances must be very extraordinary to displace it in this position without fracture of the process already mentioned.

The most prominent features, when the bone is dislocated in this way, are the forearm and hand, which are flexed and inclined inwards, as if they were twisted on their axis; the olecranon forms a prominent projection at the back of the joint.

The head of the radius, though usually somewhat displaced, may be distinctly felt in its natural position during the movement of flexion and extension. Its most prominent *symptom* is the position of the olecranon. But when the coronoid process is broken off the deformity will be greater.

The differential *diagnosis* will be made by extending the arm and pulling it, when the bones will come to their natural position if broken, but resume their former condition as soon as the arm is left to itself.

Reduction.—Reduction may be easily performed by manipulation, in preference to the plans already mentioned, pertaining to the various forms of dislocation of the elbow-joint.

It is best reduced by bending the forearm backwards beyond a straight line, when without any extension downwards the ulna returns to its normal position with a slight shock. The rationale of this method is as follows: When the ulna is dislocated backwards at the elbow, without fracture of the coronoid process, the latter occupies the olecranon depression of the lower end of the humerus, and often requires considerable force to remove it from its impacted and abnormal position. By this method, already described, the forearm is used as a lever, with the power (which is the hand of the surgeon) at one end, the fulcrum (which is the olecranon) at the other, and the weight to be moved (the coronoid process) between. As the forearm is extended backwards beyond a straight line, the olecranon impinges against the lower end of the humerus, and becomes a fixed point or fulcrum; by continuing the forced extension the coronoid process is lifted out of the olecranon depression of the humerus, and when this

is accomplished the tonic contraction of the brachialis anticus (made so by malposition) restores the ulna to its natural place, thus illustrating the fact that in dislocations when we remove all impediments to reduction, the muscles, by their action, restore the bones to their natural position.*

DISLOCATION OF THE THUMB.

The first phalanx of the thumb is liable to be dislocated either backward or forward, and it is generally admitted that the backward variety is by far the most frequent; in fact a forward dislocation of the thumb is considered a rarity.

Causes.—It is generally produced by direct violence applied to the dorsum of the thumb; also by a blow or fall on the distal end and palmar surface of the thumb.

Diagnosis.—The proximal extremity of the first phalanx sliding back upon the distal extremity of the metacarpal bone, and standing off at an angle, the metacarpal bone being again flexed upon the first phalanx. Meanwhile the distal end of the metacarpal bone is seen projecting in the palm of the hand.

The position of the thumb may be straight, or it may be more or less flexed.

Reduction.—To an inexperienced surgeon no difficulty would seem to be encountered in the reduction of a dislocation of this variety, on account of its comparative simplicity; but it has baffled the attempts of eminent surgeons, both of ancient and modern times, although in recent cases the reduction is easily accomplished if attended to soon after the displacement occurs.

There seems to be quite a diversity of opinion in regard to the obstacle to be overcome in the reduction of old cases. Sir A. Cooper believes it to be due to the muscles having their attachment on the last phalanx, although he has asserted to Lawrie, that the resistance was due to the "sesamoid bones." Helmuth, Hey, and others believe the obstacle to be in the lateral ligaments, between which the lower end of the metacarpal bone es-

* Medical and Surgical Reporter.

capes, and becomes imprisoned. Ballingall, Malgaigne, Erichsen, and Vidal (de Cassis), think the metacarpal bone is locked between the two heads of the flexor brevis, or rather between the opposing sets of muscles, which centre in the sesamoid bones, as a button is fastened into a button-hole.

Pailloux, Lawrie, Roser, and others believed that the anterior ligament, being torn from one of its attachments, falls between the joint surfaces and interposes an effectual obstacle to reduction.

Dupuytren ascribes the difficulty to the altered relation of the lateral ligaments, which are naturally parallel to the axis of the metacarpal bone, but which are now placed at a right angle; to the spasm of the muscles; and to the shortness of the member, in consequence of which the force of extension has to be applied very near the seat of the dislocation.

Wadsworth, Deville, and Lisfranc, found in ancient dislocations the tendon of the long flexor so displaced inwards and entangled behind the extremity of the bone as to prevent reduction.

Speaking of this subject, Holmes says: "Dissection of dislocations artificially produced on the dead subject, shows that when the phalanx is completely carried on the dorsal surface of the metacarpal bone, the two attachments of the flexor brevis, with their contained sesamoid bones, slip over its wide head and tightly embrace its neck.

"Although this subject has been the standard study of surgeons for many years, it is now generally admitted that the chief obstacle to the reduction of a luxation of this character is the flexor brevis pollicis muscle."

The modes of reduction are various, and are as diversified as are the opinions on the pathological anatomy of the accident. Holmes's method is either by seizing the phalanx with the thumb and finger, and making extension, or by forcibly bending it backwards, and pressing upon the displaced extremity with the thumbs, while the flexor brevis pollicis is relaxed by flexing the metacarpal bone as much as possible into the palm.

Roser's plan is somewhat similar to that of Holmes's, and he concludes, after experiments on the cadaver, that the dislocated phalanx must first be bent forcibly backwards, or into the position termed by writers dorsal flexion, so as to throw the head of the

phalanx forwards upon the articulating surface of the metacarpal bone. Willard Parker adopts the same views, after experience in all the different modes recommended by surgical writers.

Vidal (de Cassis) recommends also that the extension should be made first backwards, so as to increase the displacement of the first phalanx in this direction, and to throw forward its articular surface in the direction of the articular surface of the metacarpal bone.

One Dr. Mussey, of Cincinnati, in his paper on dislocations, read before the American Medical Association in 1850, fully illustrates the practice of American surgeons at the present day. He says: "I tilt the dislocated phalanx up until it stands upon its articulating end, place both forefingers so as to hold it in that position, and at the same time press against the distal extremity of the metacarpal bone, make firm pressure with the thumbs against the base of the dislocated phalanx, and slide it into its place, which can generally be accomplished with ease."

In the May number of the *New York Journal of Medicine* for 1856, Dr. Batchelder, of New York, says of the reduction of this dislocation: "The surgeon should take the metacarpal portion of the dislocated thumb and finger of one hand, and flex or force it as far as may be into the palm of the hand, for the purpose of relaxing the muscles with the proximal end of the phalanx, particularly the flexor brevis pollicis. He should then apply the end of the thumb of this hand against the displaced extremity of the dislocated phalanx for the purpose of forcing it downward, and at the same time grasp the displaced thumb with the other hand, and move it forcibly downwards and forwards as in strongly forced flexion and extension, the pressure against the upper extremity of the first phalanx being kept up.

"In this way the dislocated bone may be made to descend, so as to be almost or quite on a line with the articulating surface of the metacarpal bone, when the thumb may be forcibly flexed, and, if it be not reduced, as forcibly extended and brought backwards at a right angle with the metacarpal bone, when, if the downward pressure, the thumb placed as before as directed for that purpose, has been continued, the bone will slip into its place."

In the *American Journal of Medical Science* for April, 1853, you will find the method of reducing this dislocation as practiced by Crosby, of New Hampshire, who first suggested manipulations as a means of reduction. He says:

"The surgeon must place himself so as to face in the same direction as the patient, and then place the patient's hand upon his knee. Then, turn back the phalanx of the thumb, so that it will form more than a right angle with the metacarpal bone, let him place both of his index fingers against the ball of the patient's thumb, while he presses the ends of both his own thumbs against the projecting end of the luxated phalanx, pressing it forcibly forward until the head of the phalanx slips over the end of the metacarpal bone into its place, as may be readily accomplished with but little pain to the patient."

The reduction by extension is but little used at the present day, surgeons believing that the simplicity and excellence of the method of reducing this troublesome luxation, suggested by Crosby, to be one of the improvements in surgery, through the substitution of judicious manipulation for mere mechanical extension.

But those surgeons who believe extension to be an important element in the reduction of a dislocation of this character, will find various instruments devised for securing a firm hold on the displaced member. Sir A. Cooper recommends the sailor's clove hitch. Lawrie advises that the thumb shall be thrust into the open handle of a door-key. Charriere and Lubër, of Paris, have each invented forceps, so constructed with fenestra and straps, that when the blades are closed, the member is held very firmly. But perhaps the best instrument for securing a firm hold for making extension is that of Levis, with which you are enabled to apply both extension and flexion or leverage in any direction. Another contrivance for making extension, is the "Indian puzzle," first suggested to the profession in 1847 by Hamilton, and which has been used very successfully since.

The "puzzle," as described in the April number of the *Buffalo Medical Journal* for 1847, is an elongated cone of about sixteen or eighteen inches in length, made of ash splittings, and braided, the open end of the cone being about three-quarters of an inch in diameter, and the opposite end terminating in a braided cord.

When applied to the finger, it is slipped on lightly, forming a cap to the extremity, and to one-half the length of the finger, but on traction being made from the opposite end, it fastens itself to the limb with a most uncompromising grasp.

If constructed of appropriate size and of suitable materials, it becomes the more securely fastened in proportion as the extension is increased. Yet, applying itself equally to all the surfaces, it inflicts the least possible pain or injury upon the limb. When we wish to remove it, we have only to cease pulling, and it drops off spontaneously.

AFTER-TREATMENT OF RECENT DISLOCATIONS.

According to the amount of injury done to the joint, we will be guided in the treatment. If the case has been one easily reduced, with but a small amount of injury to the soft parts, the arm should be put in a sling, and the patient enjoined to keep it perfectly quiet for at least ten days, when passive motion is made, and this in a gradual manner; but should the injury be severe, the soft parts badly torn and lacerated, perfect immobility of the arm may be secured by putting on Velpeau's bandage, and this should be kept on until the swelling has to a great extent subsided and the pain has been relieved. In the meantime, Arnica, of the strength of one teaspoonful to the pint of water, may be applied thoroughly three times a day.

A good way to apply the Arnica (which should only be used in recent cases) is to first bathe the injured parts in warm water, as warm as can be borne, then, after drying the part, bathe with the solution already mentioned. The warm water will have a tendency to excite the absorbents, and hence render the Arnica more effective. This previous bathing in warm water is useful for all substances topically applied. Before the swelling has wholly subsided, passive motion must be made, to prevent anchylosis. There can be no fixed time when this passive motion must be commenced; we are guided by the feelings of the patient. Franklin says five or six weeks; but I think the writer has reference only to those bad cases where there has been extensive lacerations. My plan would be as soon after ten days as

the feelings of the patient would permit, for in that time the tendons, if torn, will be united,* and hence, to prevent anchylosis, it would be best to begin movement as early as possible.

If there remain great stiffness of the joint after the swelling has subsided, in addition to the passive motion, Rhus tox. may be applied both internally and externally. For a lotion of Rhus tox., take twenty drops of the tincture to a pint of water; but, at the same time, we must be careful of the poisonous effects of this substance. Rhus tox., 30th, internally, three times a day, will assist the treatment. If œdema occur, in consequence of injury to the vessels of the axilla, a bandage should be applied, extending from the fingers to the shoulder, and the arm kept perfectly quiet.

The remedies for this condition will be Arn., Rhus, Ars., Apis, Lyc., Merc. v., and Mezereum. They are to be prescribed according to the symptoms. For paralysis of the muscles, which sometimes occurs, either partial or complete, friction of the muscles and switching the same will be useful as a means of relief. The friction must be thorough; warm water will aid in making it effectual. The muscles should be switched transversely to the direction of their fibres, for the purpose of exciting their contractility. Should these fail, the cold douche, with friction or electricity, will be beneficial.

The remedies suitable to the nervous and other conditions accompanying accidents, will be the same as those used for those conditions in other affections, avoiding all instruments, and giving the remedy which suits the nature of the condition in which we find our patients.

CHRONIC DISLOCATIONS.

Aside from the dislocations already treated of, those that have been neglected, or improperly diagnosed and left unreduced, require our attention.

The success which may attend our efforts will be owing, as already said when speaking of the prognosis, to the nature of the inflammation, and as a consequence of the inflammation, the

* Paget.

amount of plastic material thrown out. As it is almost impossible to tell with any degree of certainty how much or how little this may be, an effort at reduction is not only good surgery, but a duty. If the bone, however, has made a false joint which permits the patient to make free use of the arm, under these circumstances it is best to let well enough alone.

The question has long been agitated as to how long a time can elapse before a reduction becomes impossible or impracticable.

Sir A. Cooper thought that three months for the shoulder, and eight weeks for the hip, may be set down as the limit beyond which any efforts of this kind, except in persons of very lax fibre or advanced age, would be highly imprudent.*

Not wishing to differ with this distinguished writer, but thinking, perhaps, this opinion has been made from the average time of many cases, it is best to be careful how we regard the limitations of Sir A. Cooper, for it is a fact well established and authenticated, that the shoulder can and has been reduced some months beyond the limit laid down by the abovementioned author.

Dr. A. Smith, of New Haven, succeeded nearly one year after the accident in reducing this dislocation.

Gross has succeeded in one case at the seventy-second day, and in another case, three months after the accident occurred. Physick succeeded in a number of instances after two and three months; and examples of from four to seven months' standing have been reported by McKenzie, Jameson, Dorsey, Gibson, and other American surgeons. Dr. Keppell, of England, is said to have succeeded at the end of fourteen months.

On the other hand we have an array of cases in consequence of the rupture of the axillary artery, which will make us careful for fear of a like result, and we would do well to examine carefully those cases as recorded by Pelletan, Flimbert, Bell, Gibson, and others. Skey does not share with others the bad results already mentioned. The immense experience of Sir A. Cooper has failed to furnish a single case of serious injury consequent on the attempt to reduce any form of dislocation. He speaks, indeed,

* Gross, p. 111.

of contusions of the muscles, and lacerations of the skin, and insensibility of the arm; but no instance of serious injury is recorded to awaken fear or distrust in the mind of the operator, or to create an alarm lest the effort should prove seriously detrimental to his patient.*

Owing to the effusion and adhesions, a preliminary treatment is necessary before the attempt is made to replace the bone. Gross† says it is best to prepare the patient by a systematic movement of the joint. This movement of the joint is intended to break up any abnormal adhesions that the bone may have contracted with the surrounding tissues, and should be conducted with great care and gentleness, the corresponding limb being carried about in different directions, flexed, extended, depressed, elevated, adducted, abducted, rotated, and circumducted; the operation should not be performed, at first, oftener than once a day, but by degrees it may be repeated every twelve hours, and it should be steadily continued for at least a fortnight. After having thoroughly performed these movements, the patient may be etherized, and the attempt made to reduce the dislocation by manipulation. After this has been tried and failed, extension and counter-extension must be made. For although mere manipulation has often proved successful even in these chronic cases, still when the muscles have, by their long-continued contracted state, become permanently tense, it is necessary that the extension be made for the purpose of extending and stretching their fibres.

Hamilton says: "We prefer always to place the patient upon a mattress laid upon the floor; two silk handkerchiefs, or two pieces of a cotton roller, are then laid along the radial and ulnar sides of the humerus, and over the middle of these, immediately above the condyles, a wetted roller is applied, its end being made fast with a needle and thread rather than with a pin. The upper ends of the longitudinal strips, or of the handkerchiefs, are now turned down and tied to the opposite ends, thus converting them both into lateral loops. For the purpose of making counter-extension, a sheet is passed around the body under the

* Skey, p. 74. † Gross, p. 112.

axillæ, and made fast to a staple; while an intelligent assistant is to manage the scapula with his naked hands, either by pulling with his fingers placed under the process, or by pushing with the palm of his hand and ball of his thumb. The pulleys, secured to a staple exactly opposite to that which holds the counter-extending band, are made ready, but are not for the present attached to the arm.

"As soon as the patient is placed completely under the influence of an anæsthetic, the operator is ready to proceed with the reduction. It is my maxim never to attempt to accomplish by complicated and violent measures what may be done as well by more simple and gentle means. I think it proper, therefore, to make several attempts at reduction by manipulation alone, aided now by the anæsthetic, the extending and counter-extending bands, etc., before resorting to the pulleys. Seating himself upon the mattress, with his boots drawn, the surgeon should bend the forearm to a right angle with the arm, and planting one heel in the axilla, with one hand he should seize upon the loops at the elbow, and with the other steady the hand and forearm of the patient, while he proceeds to make firm traction for a few seconds in the line of the body, or only a little out from this line. Failing in this, he may direct the assistant to seize upon the scapula, and make counter-extension; still not succeeding, he may change his foot from the axilla to the acromion process, and pull directly outwards at a right angle with the body, or he may swing himself gradually around until he comes to be above the head of the patient, and the foot presses firmly upon the top of the scapula; now descending again in the same direction, he will very probably find the limb reduced, or capable of being reduced easily, by operating upon it as a lever by laying it across the body, while at the same moment it is rotated slightly outwards.

"If still the reduction is not accomplished, the pulleys must at once be put in requisition. The sheet passed around the chest and fastened to a staple, is only a means of supporting the body and rendering it more steady; as a means of counter-extension its value is inconsiderable. To make fast the scapula, we must still rely mainly upon the naked hands of strong men, or upon a

strap drawn firmly across the process, and held in place by an assistant."*

It must be borne in mind, that at all times when this extension and counter-extension has failed, we must not neglect the other more simple modes of reduction, and hence make the attempt by placing the bone in close proximity to the joint, and hoping that the muscles by their contractile power may draw the head of the bone to its place.

In Bryant's *Diseases and Injuries of Joints*, page 227, he reports a case of twenty-five days' standing, which resisted all attempts at reduction by extension. Mr. Cock, at Guy's Hospital, adopted the following plan: An air pad made of vulcanized india-rubber was placed in the axilla, and the arm firmly bandaged to the side, the air pad thus being made to exert a powerful outward pressure upon the head of the bone. Upon removing the bandage upon the third day, the head of the bone was found to have returned to its natural position.

The after-treatment of these dislocations will be similar in almost all respects to the recent variety; the arm must be suspended in a sling until the swelling has subsided, and the ligaments have healed. From time to time the various lotions already spoken of must be applied, and passive motion in ten days must be made, should the state of the joint permit, in order to prevent anchylosis.

* Hamilton, pp. 563 and 564.

VIII.

ON FRACTURES AND DISLOCATIONS OF THE ANKLE.

By S. R. Beckwith, M.D., Cincinnati, O.

No joint of the body is so frequently dislocated, or so subject to active inflammation and deformity when injured, as the ankle.

Its sustaining more of the weight of the body than any other joint, in connection with its peculiar anatomy, explains why dislocations, partial, complete, and compound, fractures simple, complicated, and comminuted, are so very frequent. In common with their frequency is met violent and destructive inflammation, terminating in gangrene or ulceration; also chronic and subacute inflammation, requiring a long period of time for recovery. Deformities, and necrosis of the inferior ends of the leg-bones or tarsus, are among the unfavorable terminations of the injuries of this joint. Hence it will be proper for us to give a brief description of the surgical anatomy of the joint, before describing its numerous injuries, and their treatment.

The joint has but two motions, flexion and extension, the slight lateral movement is due to the bones of the ankle, and not to the articulation of the astragalus with the tibia and fibula. The synovial membrane is very extensive, lining the whole joint, and extending upwards beween the bones of the leg, and is intimately connected with the synovial membrane of the tarsal bones.

The ligaments are those that belong to the inferior tibio-fibular articulation, and are four in number, only two of which are torn in luxations, the transverse from its attachments to the internal

and external malleolus and the astragalus, and the inferior interosseous, which is ruptured in dislocations of the tibia inwards. The remaining ligaments are those that belong properly to the ankle-joint, and are three in number, anterior, internal and external lateral; of these the internal lateral is most frequently ruptured, especially when the astragalus rotates upon the lower end of the tibia, and is accompanied with a fracture of the fibula.

The muscles of the leg, from their length, distribution, and attachments, are prone to dislocate the joint, in cases of luxation accompanied with a fracture of the fibula and internal malleolus, with severe laceration of the ligaments.

Dislocation of the ankle occurs in consequence of displacement of the astragalus from the tibia, while it preserves its normal connection with the remaining bones of the foot, and are of four varieties: internal and external lateral, and backwards and forwards. These injuries are usually occasioned by the foot being twisted under the person in jumping, or by sudden contact of the foot with the ground while the body is thrown forward; in rare instances, by a blow applied to the leg while the foot is at rest.

Dislocation outwards is the most common, and is recognized by the sole of the foot being turned upwards and outwards, the internal malleolus projecting forcibly against the skin, with a fracture of the fibula, generally occurring about two inches above the outer malleolus. This form of luxation is often complicated with extensive laceration of the ligaments, injury of the synovial membrane, fracture of the internal malleolus, as well as of the fibula (Pott's fracture). Injury of the parts covering the inner portion of the joint is often followed by sloughing and ulceration, laceration of the soft parts adjacent to the inner malleolus, erysipelas, pyæmia, and gangrene. In consequence of these symptoms, much care and attention is necessary to be observed in the treatment of a case, and caution exercised in the prognosis.

In simple luxation outwards, reduction is easily accomplished by traction upon the foot, with the leg flexed upon the thigh. And the only caution necessary in the after-treatment is to combat the active inflammation by the use of cold or warm applications, according to the temperature of the limb, and to prevent the foot

from being turned outwards by reason of fracture of the fibula. On one point a great difference of opinion exists, which is in reference to the kind of mechanical appliances that should be used. The large majority of surgeons adopt Dupuytren's splints, while others use lateral or Pott's single splints.

The reason of these differences arises from the fact that the foot is often turned outward, or the joint partially anchylosed. Atrophy of the muscles of the inner side of the limb or chronic inflammation of the joint occurs, notwithstanding any appliance that may have been used or whatever attention may have been given in the treatment of the case; and if either of these unfavorable terminations arise after the use of any form of splint, the surgeon afterwards is certain to recommend some other variety than the one which he used. If the case is in no way complicated, any dressing will answer the purpose which will prevent the foot from being turned outward during the union of the fractured fibula. My own preference, however, is for lateral splints, observing the caution to have them well padded along the leg and foot, leaving the ankle free from any compression whatever. The splints should be firmly secured at their upper end and about the foot. The reason for this choice is that they are much more comfortable to the patient, as any one can determine by lying for any length of time in the position required in Dupuytren's splint; also that there is less pressure upon any portion of the joint, and that the broken fibula is less likely to unite in proximity to the tibia. For the reason that this accident, which is of so little consequence in many cases, is often accompanied with some of the numerous complications we have mentioned, it is well for us to refer to the pathology, and search for a reason by which to explain the frequent untoward circumstances that arise. If the injury occurs in consequence of great force, the internal lateral ligament is extensively ruptured, the synovial membrane as well as the whole apparatus of the joint suffers, and if the internal malleolus is forcibly thrust against the skin, the parts are then so severely contused that the nerves and muscles of the inner side of the joint are partially paralyzed, and redislocation with subsequent ulceration is liable to occur.

Should the patient be suffering from the bad effects of alcohol,

syphilis or scrofula, either pyæmia, ulceration, erysipelas, or non-union of bones is liable to occur during the treatment of the case.

If the dislocation occurs in a healthy man by reason of slight force, as by slipping in walking or turning suddenly, the prognosis is much more favorable than in the case previously mentioned. The external appearance of the ankle may be similar in either case, and from this fact the inexperienced surgeon often errs in his prognosis by arriving at his conclusions from physical examination alone; while the experienced wisely delays in expressing his opinion until sufficient time has elapsed for the undeveloped symptoms to present themselves. But if an opinion is exacted from him, it is given with great caution.

Several years since I was called to attend a patient suffering from luxation of the ankle, caused by a fall through a hatchway of a store, from the third story to the first floor. On reaching the patient I found the dislocation reduced by a young surgeon, and he giving a favorable prognosis, which I at once corrected, and informed the patient that it would be almost impossible for him to fully recover the use of his limb, and that he would even be in danger of loss of life or limb. The correctness of this opinion was soon verified, as it became necessary to amputate within a few days. Another complication is anchylosis, produced by inflammation of the synovial membrane, causing a lymphous deposit within the joint; also immobility of the muscles and other parts of the joint. Aside from all these various complications, and others that we have not mentioned, chronic inflammation of the interarticular cartilage and synovial membrane is perhaps the most frequent, and often accompanies sprains as well as luxations, and requires a long period of time to remove; in one instance that came under my care, the patient was compelled to use crutches in walking for nearly two years.

Treatment of Complex Cases.—If traumatic inflammation supervenes, I would recommend that the foot be raised several degrees above the line of the body, and the parts be kept constantly wet with hot arnicated water until the violence of the inflammation subsides; and if this does not remedy the condition,

envelop the foot and lower part of the limb in an earth poultice. I prefer that made from blue clay.

If the inflammation is destructive, which can be known by general prostration of strength, loss of appetite, and the swollen parts becoming soft and doughy, with a dark-red color, use a watery effusion of Baptisia externally, and an alcoholic tincture of the same drug internally. Threatened gangrene or ulceration can best be controlled by the application of a flaxseed poultice, in which is mixed pulverized Ergot, with Arsenicum and Secale taken internally. In such a case, or where pyæmia exists, the patient should have a generous diet, and be given malt liquors freely.

If the foregoing treatment is not successful, the following additional remedies are suggested: Lachesis, Mercurius corrosivus, and Phytolacca decandra.

The subacute, chronic, or rheumatic inflammations require such remedies as Rhus tox., Colchicum, Ledum palustre, and Hamamelis. The specific indications of each of these remedies are: for Rhus tox, when the ligaments are the parts affected; Colchicum for rheumatic inflammations; Ledum palustre is for inflammation of the cartilages, and is a remedy of much more value than is generally supposed; and, lastly, Hamamelis is indicated when we find venous congestion or a weakened state of the vessels; and in each case the same remedy that is being taken internally is to be applied externally.

But should the inflammation be found to exist in the interarticular cartilages and synovial membrane, no treatment will be of much benefit unless motion is prevented in the joint, which can be best accomplished by the application of plaster of Paris dressing.

Dislocation of the foot inwards is a very rare accident. I have never had but one case, and that was accompanied with a transverse fracture of the malleolus, and a longitudinal fracture of the inferior end of the tibia. The case was very troublesome; the broken portion of the malleolus becoming necrosed was removed in a few months after the injury, the joint became anchylosed, and it was nearly a year before the patient could walk without the aid of crutches. I believe this dislocation cannot occur

without splintering the tibia from within outwards, and lacerating the internal lateral ligament, and in the large majority of cases there will remain more or less deformity or feebleness of the joint.

In some cases the fibula is fractured, and whenever this occurs the fracture will be found nearer the malleolus than in the luxation outwards. The transverse ligament may be ruptured, and, if so, acute synovitis is liable to follow, from injury to the synovial membrane. Reduction is effected in a similar manner to that we have already described, but under no circumstance should pulleys or much force be used in the effort of reduction, as it will seriously injure the already broken and bruised tissues. Force can be avoided by the use of chloroform, and we always prefer to use it in every case, because it prevents danger and allows us to make a more thorough examination.

Side-splints, with a foot-board, are the best dressing, and the limb may be laid upon the outer side, as is generally recommended, or upon the heel. In every injury of the joint we have found benefit derived from the alternate use of hot and cold water, or by suspending a vessel of cold water above the joint, and allowing the water to fall upon the inflamed parts in drops.

The backward and forward dislocations are so unfrequent, that we do not consider it important to do more than mention them.

It was agreed by your Bureau of Surgery that each member should write a full description of the various injuries of the joint assigned to him by the chairman, and, in event the papers were found too voluminous for publication in the reports, that they would be published by the bureau as an appendix. I commenced this article with a full determination to perform my whole duty according to the agreement, but soon found that it would make quite a little volume if continued, and at once concluded to shorten it as much as possible.

Although only a few hints have been given of the subjects already mentioned, I find that too much space will be occupied in the report even if I shorten the article by omitting a full description of compound dislocations of the ankle and astragalus. Hence I shall only mention briefly the prognosis and treatment.

The ankle-joint more frequently suffers compound luxation

than any other joint of the body, and probably more cases have proven fatal than of all other compound dislocations known in the art of surgery. This fatality is due to the reason that the luxation is so often forcibly reduced, and efforts made to save the limb; while in compound dislocation of the knee, wrist, or elbow, if the reduction is not easily accomplished, or if the soft parts are severely injured, amputation is at once resorted to by the surgeon.

It has so happened that for the past twenty years I have been much engaged in the practice of accidental surgery for a large number of railroad machine shops and manufactories. During this period I have treated many cases of compound luxations of the ankle, and for the last fifteen years of the time have lost but very few patients from this injury. My success, I believe, depended upon the treatment which I will soon mention.

Compound dislocations of any joint are accompanied with greater fatality than compound fractures of the bones that form the joint, and this is due to the simple fact that the dislocation is reduced, and some kind of retaining dressing is used to keep the parts in position, while the fracture is not completely reduced or maintained in place, if reduction has been accomplished, until the soft parts unite, and the compound fracture is changed to a simple one. Again, in the large proportion of fractures, whether simple or compound, the fracture is oblique, and the fractured ends of the bones slip by each other, thus taking off the strain to the injured soft parts until they have recovered; while luxations are generally reduced and kept in position, notwithstanding the injured interarticular cartilage, synovial membrane, and other parts of the joint suffer from the reduction, and the muscles are constantly making an effort to relieve the pain (which their neighbors suffer) by redislocating the joint. I say it is from the strain of the muscles, and by placing injured tissues in contact after a dislocation, that the accident is so frequently fatal to life or limb.

If the same rest can be given to the soft parts after a compound luxation as after a compound fracture, the former would be no more fatal than the latter.

Treatment.—In a case of compound fracture of the ankle the surgeon must determine first, whether reduction should be attempted at all or amputation performed. If he decides to reduce, he must carefully consider how it shall be done; whether by the usual plan, or by tenotomy or resection.

On these points surgeons do not agree, and I do not propose to offer any terms of settlement, but simply to give my own experience, which is, that the compound dislocation should be reduced without division of tendons or resection of the lower end of the tibia in those cases when the soft parts have not been severely injured, and the reduction can be accomplished with slight force; in all other cases I remove by the saw one-half to one inch of the lower end of the tibia, and then reduce the luxation. By this operation I do the same thing that nature does in fractures, viz., place the parts at rest, and not crowd one injured tissue upon the other. The after-treatment consists in placing the limb in a fracture-box filled with bran or pulverized oakum packed about the foot and leg, so as to prevent motion; the box is raised several degrees above the line of the body, so as to favor free return of venous blood, and arnicated lead-water applied.

The remaining treatments consist in the usual appliances for reducing inflammation, and as soon as the joint will admit, passive motion is to be made daily to prevent anchylosis; the movements of the joint will always be impaired, and the limb shortened, yet many a limb can be saved by the treatment.

In conclusion I would not wish to be understood to say that resection and reduction will always prove favorable, for I am of the opinion that in compound luxations of the ankle, whether amputation is performed early, or the parts not reduced, or by whatever means they may have been reduced, many cases will prove fatal; and at a time in the treatment when least expected by the inexperienced surgeon, often have I seen cases, promising well for a week or ten days, where active inflammation and gangrene ensued, blighting the brightest hopes of recovery.

IX.

HYDRARTHROSIS OF THE KNEE-JOINT,

TREATED BY PNEUMATIC ASPIRATION.

By R. E. Caruthers, M.D., Alleghany, Pa.

About May 1st, 1873, Robert B——, æt. 76 years, applied to me for treatment. He had been troubled more or less during the preceding winter with pain and weakness in his right knee. He did not pay much attention to it, thinking it was only rheumatism, but at this time it seemed to be getting worse.

The pain was not very severe, but rather of a dull, aching character; that which he complained of most, was a weakness of the joint; when he attempted to walk, the knee would give way under him.

He could give no account of its origin, and the only thing it could be traced to was a slight sprain received in the fall of 1872, which, however, gave him no particular trouble at the time of its occurrence.

He had used various external applications, from time to time, with little or no benefit.

When examined, the knee was found to be somewhat swollen, and had a puffy appearance; not painful to the touch, except at a point on either side of the patella; there was no discoloration or redness of the surface, and the knee seemed to be of the same temperature as the other; the puffiness was more marked when he rested his weight on the affected limb, at which time a prominence could be observed on each side of the patella, caused by an over-distension of the synovial sac, by the increased amount of fluid contained in it. The fluid could be readily detected.

Taking into consideration the probability that it was the result of a sprain, in the absence of any characteristic indications except

some stiffness when attempting to walk, I prescribed Rhus tox.^{6}, a dose every three hours. A bandage was applied from the toes to a short distance above the knee, and the patient enjoined to keep as quiet as possible. This latter injunction, however, was not obeyed, as the patient would not consent to lie in bed, or even to sit quietly in a chair.

At the end of two weeks there seemed to be no improvement; the quantity of the fluid seemed to be slightly increased, and the weakness when attempting to walk was more noticeable. While sitting or lying quiet the pain was inconsiderable, but increased when moving.

I now prescribed Bryonia 6th, and continued the use of the bandage for a week longer. The swelling continued to increase, the integuments being tense; the pain was almost constant, and of a severe, aching character.

He was now induced to keep his bed, and fomentations of warm water were applied constantly, which had the effect of relieving the pain temporarily. Bry. 6th was continued during the day.

At this time the patient was seen, in consultation, by Dr. Willard, who recommended the use of the "Pneumatic Aspirator" of Dieulafoy, for the purpose of extracting the dropsical accumulation, and thereby release the tension of the surrounding structures. This was accordingly done the next day, Dr. Willard operating. The number one tubular needle was inserted at a point about three-fourths of an inch from the inner border of the patella, and about two ounces of a viscid, straw-colored fluid were drawn out.

The puncture was covered with adhesive plaster, and the limb kept at rest for two or three days.

The pain ceased immediately, and did not return. The weakness remained for some time, but the structures gradually regained their normal tone.

The remedy, Bryonia, was continued for some days longer, but as there was no sign of a return of the trouble, it was discontinued.

Up to the time of the present writing (May 25th, 1874), there has been no more pain nor swelling, but the knee seems to be as strong in every respect as its fellow.

APPENDIX.

DISCUSSIONS.

[Third Day's Session.]

J. D. BUCK, M.D., Cincinnati, O.: I have a word to say in reference to the use of the phosphates in the formation of osseous tissue. I do not agree with the proposition advanced in one of the papers just read. I do not believe that the potentized medicine will supply the necessary elements in the case of non-union, although I am willing to admit that it may act beneficially in another way. But there are cases, such as fracture and rachitis, where these elements are wanting, and I do not believe that in such cases the potentized drug, either directly or by exciting some force, will supply the deficiency. I think this is a fact, and that it is too much overlooked. I think we expect too much from our medicines, sometimes more than they are able to give.

There is another point in connection with the use of the phosphates in similar cases to those I have just mentioned. I am of the opinion that, as organized in the animal body, they are more active and efficacious as medicines than when derived direct from the mineral kingdom. For instance, in cases of marasmus occurring in children, in whom not only the teething process is going on, but the osseous system is in process of formation, I have been in the habit of taking a piece of beef-bone, and reducing it to a fine powder, and administering it in appreciable doses, and I must say with very decided beneficial results. This is nothing original with me. I believe the idea originated with Professor Gatchell. I have followed this course for a number of years with parturient women and marasmic children, and in cases of fracture.

LEMUEL C. GROSVENOR, M.D., Chicago: I have been very much interested in these various papers, which, in my opinion, reflect great credit upon their authors, and upon the school of medicine to which they belong. I was especially interested, however, in the paper by Dr. McClelland, because it referred to cases similar to those which I have frequently had to deal with. The Doctor makes reference to the use of the starch bandage. This I have made very frequent use of in fractures, and my plan is to first envelop the limb with thick flakes of cotton batting, and

then apply the starch bandage, making two or three coverings with it, and placing the limb on a pillow or on some other safe place where the bandage will dry quickly. I have found that, by adding a quantity of alcohol to the starch, it generally dries more quickly, which is an important consideration. I sometimes, also, add some gum to the starch, to hurry the drying and increase the stiffening quality. Made thus and nicely applied it is a very advantageous splint, especially as it allows of the patient going about on crutches very soon, and because it is easily removed. For restless people and children, who are hard to confine or keep at rest, the plaster of Paris bandage is better, as it sets more quickly, and the patient can be allowed to go about almost at once.

SECTION VI.

REPORT

OF THE

BUREAU OF ORGANIZATION, REGISTRATION, AND STATISTICS,

T. S. HOYNE, M.D., ... Chicago.
P. DUDLEY, M.D., ... Philadelphia.
H. M. SMITH, M.D., ... New York.
W. M. WILLIAMSON, M.D., ... Philadelphia.
M. F. PAGE, M.D., ... Appleton, Wis.
E. U. JONES, M.D., ... Taunton, Mass.
FRANCIS HILLER, M.D., ... San Francisco, Cal.

TO THE

TWENTY-SEVENTH SESSION

OF THE

American Institute of Homœopathy.

VOLUME I. NUMBER 7.

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XVI. Report of the Bureau on Statistics, ... T. S. Hoyne, M.D.

XVI.

REPORT OF THE BUREAU ON STATISTICS.

By T. S. Hoyne, M.D., Chicago, Ill.

The following statistics have been prepared with great care, the chairman of the bureau having used all the information that could be obtained from homœopathic directories (New York, Pennsylvania, and Illinois), society reports, etc. The figures given of the States of New York, Pennsylvania, and Illinois are accurate; those of other States approximate very closely, with the exception of Michigan, which is probably overstated.

The total number of homœopathic physicians in the United States does not vary greatly from 4800, distributed as follows:

Alabama,	10	Vermont,	80
California,	60	Washington Territory,	5
Connecticut,	100	Wisconsin,	240
Delaware,	20	Arkansas,	10
Florida,	10	Colorado,	20
Illinois,	425	Dakota,	5
Iowa,	200	District of Columbia,	21
Kentucky,	80	Georgia,	30
Maine,	60	Indiana (about ⅓ not graduates),	200
Massachusetts,	340	Kansas,	65
Minnesota,	75	Louisiana,	40
Missouri,	135	Maryland,	45
Nebraska,	35	Michigan,	350
New Hampshire,	50	Mississippi,	40
New Jersey,	175	Montana,	2
Ohio,	510	Nevada,	10
Pennsylvania,	437	New York,	737
South Carolina,	8	North Carolina,	15
Texas,	30	Oregon,	4

Rhode Island,	50	Virginia,	20
Tennessee,	25	West Virginia,	15
Utah,	5		

In the State of New York there are 737, or 1 homœopathic physician to every 5921 persons. In Albany 15, or 1 to 4628 persons; in Auburn 7, or 1 to 2460; in Binghamton 5, or 1 to 2538; in Buffalo 18, or 1 to 6539; in Brooklyn 95, or 1 to 4169; in New York City 170, or 1 to 5543; in Elmira 7, or 1 to 2266; in Oswego 4, or 1 to 5227; in Rochester 15, or 1 to 4159; in Troy 9, or 1 to 5163; in Syracuse 13, or 1 to 3327.

In the State of Illinois there are 425 homœopathic physicians, or 1 to every 5975 persons. In Springfield 5, or 1 to 3473; in Quincy 6, or 1 to 4008; in Peoria 7, or 1 to 3684; in Chicago 98, or 1 to 4081.

In the State of Pennsylvania there are 437 homœopathic physicians, or 1 to every 8046. In Pittsburg 20, or 1 to 4303; in Lancaster 3, or 1 to 6744; in Alleghany 12, or 1 to 4431; in Reading 6, or 1 to 5655; in Harrisburg 12, or 1 to 1925; in Philadelphia 171, or 1 to 3941.

In the State of Ohio there are 510 homœopathic physicians, or 1 to every 5214 persons. In Cincinnati 44, or 1 to 4914; in Cleveland 57, or 1 to 1628; in Columbus 8, or 1 to 4219; in Dayton 9, or 1 to 3620; in Toledo 12, or 1 to 2378; in Hamilton 4, or 1 to 2770.

In the State of Indiana there are about 200 physicians practicing homœopathy, and this does not include those who are constantly ordering medicines from homœopathic pharmacies, and yet denying the name of homœopath. There is 1 physician to about 8180. In Evansville 6, or 1 to 3805; in Fort Wayne 4, or 1 to 4429; in New Albany 3, or 1 to 4758; in Indianapolis 13, or 1 to 2812.

In the State of Michigan the number of homœopathic physicians given is 350 (probably over-estimated), or 1 to every 3383 persons. In East Saginaw 4, or 1 to 2847; in Saginaw 3, or 1 to 3366; in Grand Rapids 6, or 1 to 2751; in Lansing 3, or 1 to 1747; in Detroit 15, or 1 to 5305.

In the State of Massachusetts there are 340 homœopathic physicians, or 1 to every 4286 persons. In Cambridge 2, or 1 to 19,817; in Charlestown 3, or 1 to 9441; in Boston 54, or 1 to

4639; in Fall River 6, or 1 to 4461; in Lowell 10, or 1 to 4092; in Lynn 7, or 1 to 4033; in Salem 4, or 1 to 6029; in Springfield 8, or 1 to 3338; in Worcester 7, or 1 to 5872; in Taunton 4, or 1 to 4657; in New Bedford 6, or 1 to 3553; in Lawrence 4, or 1 to 7230; in Chelsea 6, or 1 to 3090; in Gloucester 2, or 1 to 7693; in Newburyport 3, or 1 to 4532.

In the State of Maine there are 60 homœopathic physicians, or 1 to every 10,461. In Augusta 2, or 1 to 3907; in Bangor 2, or 1 to 9144; in Lewiston 1 to 13,600; in Portland 5, or 1 to 6282; in New Brunswick 1 to 15,059.

In New Hampshire there are 50 homœopathic physicians, or 1 to every 6366 persons. In Concord 3, or 1 to 4080; in Manchester 2, or 1 to 11,768; in Portsmouth 3, or 1 to 3070.

In the State of Connecticut there are 100 homœopathic physicians, or 1 to every 5374 persons. In Bridgeport 6, or 1 to 3161; in Hartford 12, or 1 to 3098; in New Haven 8, or 1 to 6355; in Norwich 3, or 1 to 5551.

In the State of Wisconsin there are 240 homœopathic physicians, or 1 to every 4205 persons. In Madison 3, or 1 to 3057; in Fond du Lac 5, or 1 to 2552; in Milwaukee 18, or 1 to 4205.

In the State of Texas there are 30 homœopathic physicians, or 1 to every 26,582. In Galveston 3, or 1 to 4606; in Austin 1 to 4428; in Sherman 1 to 3800.

I have not the statistics of allopathic physicians, except in the cities of New York, Philadelphia, Boston, and Chicago.

New York, homœopathic physicians 170, or 1 to 5543; allopathic 984, or 1 to $941\frac{4}{10}$.

Philadelphia, homœopathic physicians 171, or 1 to 3941; allopathic 655, or 1 to $1029\frac{4}{10}$.

Boston, homœopathic physicians 54, or 1 to 4639; allopathic 233, or 1 to $1075\frac{2}{10}$.

Chicago, homœopathic physicians 98, or 1 to 4081; allopathic 444, or 1 to 901.

The following table shows at a glance the number of persons to every homœopathic physician, in each of the States:

Alabama,	1 hom.	phys. to	99,696	Georgia,	1 hom.	phys. to	40,020
California,	"	"	9,338	Indiana,	"	"	8,180
Delaware,	"	"	6,252	Kansas,	"	"	5,582

Louisiana,	1 hom. phys. to	18,318	Illinois,	1 hom. phys. to	5,975
Maryland,	" "	14,178	Iowa,	" "	5,959
Michigan,	" "	8,383	Kentucky,	" "	16,512
Mississippi,	" "	20,854	Maine,	" "	10,461
Nebraska,	" "	8,514	Massachusetts,	" "	4,289
New Hampshire,	" "	6,366	Minnesota,	" "	5,807
New York,	" "	5,921	Missouri,	" "	12,798
Ohio,	" "	5,214	Nevada,	" "	4,249
Pennsylvania,	" "	8,046	New Jersey,	" "	5,176
South Carolina,	" "	91,000	North Carolina,	" "	71,327
Texas,	" "	26,583	Oregon,	" "	22,730
Virginia,	" "	61,241	Rhode Island,	" "	4,345
Wisconsin,	" "	4,397	Tennessee,	" "	50,319
Arkansas,	" "	48,317	Vermont,	" "	4,132
Connecticut,	" "	5,874	West Virginia,	" "	29,707
Florida,	" "	18,775			

In all the States and Territories there are about 4800 (and this is a low estimate) homœopathic physicians, or 1 to every 8120 persons.

The six New England States have a population of 3,487,440, and 670 homœopathic physicians, or about 1 to 5129 persons.

The four Middle States have a populatian of 8,911,249, and 1369 physicians, about 1 to every 6509 persons.

The States of Illinois, Indiana, Ohio, Missouri, and Wisconsin have a population of 9,642,065, and 1509 homœopathic physicians, or 1 to every 6389 persons.

In general terms, then, we may say that there is 1 homœopathic physician to every 6000 persons in the Eastern, Middle, and Western States. But in every one of the States mentioned there is room for quite a large number of additional physicians. In Illinois, for instance, there is room for at least 75 more, which would bring the average down to 1 to every 5000 persons. The number required in the other States would probably bring their average down to 1 for every 5000. Let it be remembered, however, that these physicians are not required in the large cities and towns, but in the smaller towns and villages.

What has been done in the States mentioned *can* be done in the others, so that we estimate that there should be 1 homœopathic physician to every 5000 persons in every State and Territory. This would give us a total of 7795 physicians of our school

in the United States, leaving a deficiency at present of 2995; a deficiency which ought to be supplied in a few years. To advance the cause of homœopathy it is only necessary to place good men in different sections of the country, and the system soon advertises itself. Could we to-day place these 2995 physicians in different parts of the Southern and Western States, the cause would receive such an impetus that we should soon be called upon for an additional 1000.

In the cities where the homœopathic colleges are situated, the system grows faster than in other cities of the same size. Compare Cleveland and Cincinnati. Cleveland, half the size of Cincinnati, has 13 more homœopathic physicians, owing to the long existence of the college in the former place. Compare Baltimore and Philadelphia. Philadelphia, two and a half times as large, has seven times as many physicians. Compare Boston and Chicago. Chicago, one and a half times larger than Boston, has nearly double the number of homœopathic physicians. Buffalo, with a population of 117,715, has 18 physicians. Cleveland, with 92,846 population, has 57.

It was my intention in this paper to give the number of dispensaries, societies, etc., but owing to the want of time, and lack of facilities, I was unable to procure the desired information.

In 1868 the Bureau of Organization, etc., reported the number of homœopathic physicians in the United States. In some instances, as New York for example, the number was greatly overstated.

State.	1868.	1874.	State.	1868.	1874.
Alabama,	18	10	New Jersey,	90	175
California,	18	60	Ohio,	852	510
Connecticut,	81	100	Pennsylvania,	874	437
Delaware,	12	20	South Carolina,	4	8
Florida,	3	10	Texas,	11	30
Illinois,	394	425	Vermont,	64	80
Iowa,	121	200	Washington Territory,	—	5
Kentucky,	44	80	Wisconsin,	199	240
Maine,	51	60	Arkansas,	3	10
Massachusetts,	251	340	Colorado,	—	20
Minnesota,	42	75	Dakota,	—	5
Missouri,	68	185	District of Columbia,	14	21
Nebraska,	5	35	Georgia,	20	30
New Hampshire,	37	50	Indiana,	119	200

State.	1868.	1874.	State.	1868.	1874.
Kansas,	21	65	Oregon,	—	4
Louisiana,	21	40	Rhode Island,	34	50
Maryland,	24	45	Tennessee,	6	25
Michigan,	275	350	Utah,	—	5
Mississippi,	16	40	Virginia,	21	20
Montana,	—	2	West Virginia,	6	15
Nevada,	2	10			
New York,	818	787			
North Carolina,	2	15	Total,	3636	4794

There is a seeming loss in Alabama, New York, and Virginia, but these States were probably over-estimated at that time, as were also Illinois, Michigan, Wisconsin, Iowa, and Minnesota.

In conclusion, the bureau would recommend that the Institute publish every third year a complete directory of the homœopathic physicians of the United States, with a list of societies, colleges, hospitals, etc., as we believe that in this way only can be accurately determined the rapidity of our advancement.

SECTION VII.

REPORT

OF THE

BUREAU OF ANATOMY, PHYSIOLOGY, AND HYGIENE,

J. D. BUCK, M.D., ... Cincinnati.
W. WEBSTER, M.D., ... Dayton, O.
W. VON GOTTSCHALK, M.D., ... Providence, R. I.
F. WOODRUFF, M.D., ... Ann Arbor, Mich.
A. R. THOMAS, M.D., ... Philadelphia.
H. B. VAN NORMAN, M.D., ... Cleveland, O.

TO THE

TWENTY-SEVENTH SESSION

OF THE

American Institute of Homœopathy.

VOLUME I. NUMBER 8.

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XXI.

OBSERVATIONS ON THE LYMPHATICS.

By A. R. Thomas, M.D., Philadelphia.

I. ANOMALIES IN STRUCTURE AND DISTRIBUTION.

Probably every organ or system of structures of the human body is liable to occasional anomalies of formation or distribution, constituting either a simple variation from the normal arrangement, or perhaps a monstrosity of the most complete character. Many of these variations may be so slight as to exert no influence upon the performance of function, and perhaps may never be detected except upon a careful dissection, as in anomalies in the number and distribution of arteries, muscles, etc., while others may be of such a character as to give rise to the most marked deformities, or perhaps to render life impossible. The undeveloped brain of the anencephalous fœtus, extroversion of the thoracic or abdominal viscera, arrested development of the septa of the heart, occlusion of some portion of the alimentary canal, are each of occasional occurrence, and each incompatible with life after birth.

Variations from the normal standard being thus common to the skeleton, bloodvessels, muscles, nervous system, viscera, and extremities, reasoning from analogy, we may naturally conclude that the *lymphatic system* is not exempt from liability to the same occasional modifications of structure or distribution. The difficulties, however, attending a satisfactory demonstration of the lymphatic system, have thus far rendered the detection of any such variations extremely difficult.

The influence upon the organism of any material change in this system of vessels will be apparent at once. Offering, as it does, almost the sole chance by means of which the nutritive products of digestion may be conveyed from the alimentary canal to the bloodvessels, for distribution to the various tissues and organs of the body, any considerable variation from the normal arrangement, as perhaps termination of the thoracic duct in the arterial rather than in the venous system, or closure of the duct itself, would be followed in the one case by greatly impaired nutrition, and in the other by rapid inanition and death.

My attention has been called to this subject, by two cases of *congenital termination of lymphatics on the surface of the body*, which have come under my notice; cases of the like of which I have seen no previous report.

CASE 1. Some years ago I had under treatment for some pulmonary trouble, a young man who on one occasion desired to call my attention to a peculiarity upon the upper and inner portion of his left thigh. Upon exposing the part, the surface to the extent of a half inch or more in diameter presented a glazed appearance, as if covered with dried albumen. Upon moistening this surface with a little saliva, this glazed appearance was at once removed, when by pressure with the finger from below upwards, along the line of the lymphatics, there oozed from an almost invisible orifice a small drop of clear viscid fluid. His statement was, that this peculiarity had existed from his birth, and had never been a source of trouble of any kind. That this fluid was lymph, and that it escaped from a congenital opening communicating with a lymphatic vessel, was perfectly evident.

CASE 2. A lady called my attention to the neck of her boy, a lad of about four years, when just above the right sterno-clavicular articulation, a minute valvular orifice with red edges was plainly visible, and from which by pressure just above the clavicle, or frequently by movements of the head and neck, there would ooze a small drop of clear lymph. A fine probe could be readily passed obliquely downwards through the opening to the distance of half an inch. This peculiarity had been noticed by the mother soon after the birth of the child, and continues to the present time.

These cases are sufficient to establish the fact of occasional variations in the arrangement of the lymphatics, and to justify the assumption, that certain cases of impaired nutrition, and early death with young children, may be from such a cause. It is not unfrequently that we see children born apparently strong and healthy, but who immediately languish, and without any satisfactory reason, and in spite of every care, in a few days or weeks perish. A post-mortem examination in these cases rarely throws any light upon the matter, the heart, lungs, and digestive organs being apparently in a healthy condition.

Among the *possible* abnormalities of the lymphatic system, which might influence nutrition, or perhaps destroy life, there has been suggested to our minds, first, the *termination of the thoracic duct and discharge of its contents into the arterial rather than into the venous system.* It may be difficult to define just what the influence of such a variation might be upon nutrition, yet from the fact, that in all vertebrate animals the duct discharges into the subclavian vein, thus causing the chyle to first pass through the lungs, when it is submitted to the influence of the oxygen of the air before it is distributed to the tissues, it is reasonable to suppose, that the action of that gas produces some important change in the chyle, possibly converting the albumen into fibrin, a process supposed to be produced in part by the lymphatic glands, better adapting it to the nourishment of the tissues.

Occlusion of the Thoracic Duct, another abnormality of which it is possible to conceive, would necessarily be followed by early and rapid exhaustion and death, and this may be a not infrequent cause of early death in new-born children.

The difficulties attending a careful dissection of the lymphatic system—this being possible only after a successful injection of its vessels, which is in itself an extremely difficult operation—interfere with the ready establishment of this theory by positive demonstration. Opportunities in private practice rarely offer for such detailed examinations, hence we must look to children's hospitals or other institutions, where suitable cases and the necessary facilities may be commanded, for the prosecution of this new field of inquiry.

II. THE LACTEALS RENDERED VISIBLE BY DISEASE OF THE MESENTERIC GLANDS.

The small size of the lacteals or lymphatics of the mesentery, with the thinness of their coats, render these vessels quite invisible, except when distended with chyle; but as they soon become empty after the completion of the process of digestion, ordinarily in post-mortem examinations no trace of the lymphatics will be seen. Hence, to satisfactorily demonstrate these vessels, a young animal must be killed while the process of digestion is going on; when, the lacteal vessels being distended, upon opening the abdominal cavity, they are found distinctly visible, as fine white lines, extending from the intestines back to the glands near the attached border of the mesentery. If the animal be young, and with little adipose tissue, it will be possible to trace the distended thoracic duct also in its course through the chest.

It might be anticipated that disease of the glands into which the lymphatics of the mesentery discharge, would interrupt the ready flow of the chyle through those bodies, and thus lead to an over-distended condition of the afferent lymphatics, rendering them visible at the usual period of a post-mortem examination. A case of this kind came recently under my notice. I was called, in April last, to make a post-mortem examination in a case of tuberculosis. The body was extremely emaciated, scarcely a trace of fat being found. Upon exposing the mesentery, the lymphatic glands were found enlarged and unusually hard, while the lacteals could be traced with great distinctness, from the intestines back to the glands, as fine whitish lines, their visibility evidently depending upon their being filled with some substance absorbed from the intestines and interrupted in its passage through the consolidated glands.

The hardening of the glands in this case was evidently from inflammation and tubercular infiltration, which, it can be readily understood, would interfere with the free passage of the chyle, and thus tend to induce an enlargement of the vessels containing that fluid. In time, had the patient lived, suppuration would undoubtedly have taken place in these glands, as is so frequently

seen in tubercular consumption. This patient had had no diarrhœa during life, the great emaciation being the only evidence of impaired nutrition.

III. NEW DISCOVERIES IN THE LYMPHATIC SYSTEM.

While anatomists have for a long time been familiar with the structure, distribution, etc., of the principal lymphatics, much obscurity has existed as to the manner of origin of these vessels, particularly in the skin, mucous and serous membranes. Recent discoveries have, however, thrown much light upon this subject, and the road has probably been opened whereby the whole mystery will be solved.

By a series of experiments and observations on the serous membranes of various animals, including the guinea-pig, rabbit, cat, dog, monkey, etc., as conducted by Recklinghausen, Auerbach, Ludwig, Klein, and other German physiologists, the following points have been well established:

1. *A Free Communication between Serous Cavities and the Lymphatic System by means of minute orifices known as Stomata.*— In 1862, Recklinghausen succeeded, after a series of experiments, in showing that both dissolved and undissolved substances injected into the serous cavities find their way into the lymphatics of the serous membranes. This operation was soon followed by the discovery that the serous membranes, particularly the peritoneum and pleura, presented at various points minute orifices, surrounded by radiating epithelial cells, and constituting little mouths or *stomata,* which are continued as a short vertical channel, opening at right angles into a straight lymphatic, parallel to the surface. These vertical passages are lined with epithelial cells, as are the lymphatics into which they open. From this view it would appear that the serous membranes are but appendages to the lymphatic system, consisting of vast expansions of the lining of those vessels. The physiological importance of this arrangement has not as yet been satisfactorily demonstrated. In inflammation of the serous membranes a remarkable proliferation of the epithelium, particularly around and within the stomata, takes place, these cells falling partly into the peritoneal

cavity, and partly into the lymphatic vessels, the former probably degenerating into pus-cells, the latter becoming lymph-corpuscles.

2. *A Remarkable Relation of Bloodvessels and Lymphatics in the Serous Membranes: Invagination.*—On a microscopic examination of the lymphatics of the peritoneum, particularly of the omentum, the veins have the appearance of being accompanied by a lymphatic on either side; a more careful examination, however, renders it evident that the vein is *within a larger lymphatic*, constituting an *invagination* of the vein. "There cannot be the slightest doubt that such invaginations occur. They are of various kinds. One case, for example, which is quite easy to make out, is that of a vein invaginated for a considerable part of its course, while, at the same time, all its branches, so long as they are not capillaries, are also invaginated. The chief lymphatic, containing the venous trunk, leaves the latter, after a long course, at a point where this vein opens into a larger trunk, and then unites with the lymphatic that accompanies this principal venous trunk. It may also happen, secondly, that the lymphatic leaves the bloodvessel long before the latter opens into a large trunk; in this case the vein and lymphatic run side by side to the latter point. Finally, there is a third case which, however, in the omentum is much rarer, viz., where the lymphatic accompanying a bloodvessel (and invaginating it) suddenly acquires an extensive dilatation, through which the bloodvessel penetrates, breaking off at an angle, while the lymphatic can be traced a long way beyond the dilatation."*

Again, there has been noticed a relation of capillary bloodvessels with the lymphatics, similar to that found between the uriniferous tubes and capillaries, in the Malpighian corpuscles of the kidney; a portion of the wall of a lymphatic presents a sacciform dilatation, within which are found ramifications of capillaries, both arterial and venous.

3. *Amœboid Movements of Lymph-Cells.*—The peculiar power of the amœbus—one of the lowest forms of animal life, and consisting of a mass of transparent, apparently homogeneous sarcode—has long been known, of changing its form from a

* Kline's Anatomy of the Lymphatics, p. 82.

rounded mass to an angular, stellate, or greatly elongated condition, by means of which it may grasp its food or insinuate itself through a passage much smaller than its body. A careful examination of lymph-cells while circulating in the vessels has shown them to possess a similar power of changing their form, thus possibly enabling them to pass through the walls of the lymphatics into the adjoining tissues, or perhaps into an invaginated bloodvessel.

These several discoveries in the minute anatomy of the lymphatic system are, no doubt, destined to be followed by others of no less importance, all tending to materially modify our present views on many points of both physiology and pathology.

XXII.

THE FUNCTIONS OF THE LYMPHATIC GLANDS.

By F. F. De Derkey, M.D., Mobile, Ala.

The general ideas regarding the functions of the lymphatic vessels and glands are very vague, indistinct, and unsatisfactory. The prevailing opinion, however, is, that the absorbent vessels, whether lacteals or lymphatics, have the power, and that therefore it is their duty and sphere, to change albumen or albuminose into fibrin, to compensate for the waste occasioned by the motory activity in the muscular system. Besides this, there is the development of the chyle-corpuscles, which are said to be the forerunners of the true red blood-cells.

Matter of corresponding necessity or use to the organism, diffused in the tissues or introduced, is absorbed by the lymphatics, whilst noxious and foreign matters enter immediately the circulation, in order to be eliminated from the organic system by the excretory organs.

Lymphatic vessels are first met with in fishes; the vascular system of mollusks, the class below, consisting of circulatory vessels with open ends, as it were, left-hearted only, is devoid of them. They begin to appear in fishes, whose circulatory apparatus is a right-hearted one, and continue throughout all animated nature to be an appendix of this right-hearted apparatus of the higher class of mammals. As such appendix, they are met with in the human being, opening and emptying their contents into the larger veins. As a conglomeration to lymphatic glands, they are first met with in birds; all lower animals, though

having lymphatics, have no glands. According to the researches of Kölliker, lymph which has not passed through lymphatic glands contains but very few or no corpuscles at all, notwithstanding its short or long course through lymphatic vessels, which seems to confirm the opinion of the formation of chyle-corpuscles in these glands.

The two facts, that a combination of lymphatic vessels to lymphatic glands are first met with in birds, together with the appearance of the corpuscles in them, lead to the conclusion made by Hausmann, that the blastema to the blood-corpuscles of the bird is formed in these glands. This gives a more distinct definition to one of their multifarious functions.

On microscopical examination of the non-inflammatory infiltration of the lymphatic glands as it exists in chronic swellings, Virchow found no cheesy or albuminous matter, but a considerable increase of cells.

As regards diseases of the lymphatics and their glands, they are ameliorated by waking and aggravated by sleep.

XXIII.

DISEASES OF THE LYMPHATIC GLANDS AND VESSELS, AND THEIR RELATIONS TO OTHER DISEASES.

By William von Gottschalk, M.D., Providence, R. I.

The morbid processes in these systems are:

1. Derangement of texture, with its manifold sequelæ in suppuration, induration, etc.

2. Anomalies of volume.

3. Anomalies of the calibre in the lymphatic vessels, appearing as dilatation or contraction. The dilatation is sometimes only partial, sometimes occupying a whole division of the lymphatic vessels; in very rare cases even a general dilatation of the lymphatic vessels has been observed. It is either smooth, knotty, or varicose. The membranes of the enlarged lymphatic vessels are either thickened, or thin and flabby. The contraction of lymphatic vessels is the sequel of compression by swellings, or obliterations produced by adhesive inflammations of the walls.

4. New formations. Cancer and tubercle are very frequent in the lymphatic glands. Cysts are scarce; but very often we find the formation of a black pigment, particularly in the bronchial glands of old people; so much so, that these organs seem to be changed into black swellings; the same black pigment is also found in other glands, particularly in the mesenteric glands, although here in smaller quantity. Like all other coloring matter, so also is this black pigment to be considered as produced from the coloring matter of the blood, which, in the course of

repeated hyperæmiæ, has been deposited in the glands. The same process we see frequently in the apices of the lungs. In the mesenteric glands is a blackish or slate-colored pigment, a frequent sequel of the process of typhus. In the lymphatic vessels new formations are limited to cancer and tuberculosis; both, of course, are always only secondary, and appear as clogging masses in the channels of lymphatic vessels. They are always the consequence of an absorption of melting tubercular matter or soft cancer, from any primary tubercular or cancerous disease. Tuberculosis appears in the lymphatic vessels as a yellow, cheese-like mass; cancer as a white, soft, creamlike substance, consisting of the finest form-elements. The lymphatic vessels are often thickened in their membranes and dilated in their lumen, in consequence of additional inflammation. We can see this tuberculosis of the lymphatic vessels in the vessels of the chylus, in tuberculosis of the mesenteric glands, in tubercular ulceration of the intestines, etc.; and we can see cancer of the lymphatic vessels in the medullary forms of cancer of the breast, the bones, the stomach, the liver, the uterus, etc.

5. Anomalies of the contents. We find these as inflammatory and suppurative processes in the lymphatic vessels and glands. A disposition to diseases of lymphatic glands and vessels is found, without any doubt, in childhood and the period immediately after pubescence, because at this time these organs are more active and richer in blood than at later periods of life. Furthermore, we find often an inherited constitution transmitted from parents to children, in which is noticed a remarkable disposition of the lymphatic glands and vessels to disease, even from the most insignificant cause. This constitution, which is called the lymphatic or scrofulous, is also often produced by improper mode of living, bad nutriment, etc. Of external influences, the proportion of temperature and humidity of the air are important; colds, the residence in damp and cold houses, where the sun never reaches with his warming rays, are often causes of diseases of the glands.

Continued pressure on lymphatic vessels and glands, whether it be caused externally by bandages, etc., or internally by tumors, cysts, etc., will lead, in the first case, to more or less complete

obliteration of their calibre; in the second case, to indurations or atrophy. And these conditions can become causes of dilatation of lymphatic vessels.

Otherwise, a lymphatic collateral circulation has been observed as a consequence of obliteration of lymphatic vessels, and even in the rare cases of total obliteration of the ductus thoracicus the course of the lymph has been found reproduced by collateral branches.

Of much greater importance is the poisoning of the lymphatic vessels and glands by septic and virulent matter from bad wounds, ulcers, etc. The most dangerous forms of inflammation of the same, and even infection of the whole blood, are produced thereby. And even simple ulcers, eruptions, excoriations, catarrh, etc., can give cause to inflammatory conditions of such lymphatic vessels and glands as lie in the neighborhood of the same.

Diseases of the lymphatic vessels are, by the superficial course of the latter, easily recognized, and show themselves, according to the process of the disease, sometimes by reddened stripes of the skin (running parallel with the diseased vessel), sometimes by hard or knotty strings. These symptoms are of course missed in affections of deeper-lying lymphatic vessels. In an acute course, diseases of lymphatic vessels cause generally pains; they are usually accompanied by œdematous swelling or hard infiltration of the surrounding soft parts, particularly of the cellular tissue; the motion of the parts, wherein the affected lymphatic vessels run, is more or less difficult. Affections of the lymphatic vessels usually branch out to the next lymphatic glands, and cause in these the same process of disease; and either the disease ceases here, or branches out to the next lymphatic vessels and glands, where the same process is repeated.

Diseases of such lymphatic glands, which can be examined directly, with the exception of atrophy, are commonly noticed by swellings. These swellings can reach different sizes, according to the process of the disease, and even can rise to the size of a fist; all other symptoms of swellings of lymphatic glands also vary according to the process of the disease. Sometimes the swelling is soft and fluctuating; sometimes hard and resisting; sometimes flat and even; sometimes knotty and uneven; to the

touch more or less painful, and again sometimes entirely indolent, even to a great deal of pressure. The process of the disease extends here likewise to the surrounding cellular tissue of the gland. By their swelling, diseased glands can press on neighboring parts (nerves, vessels, etc.), or can draw mucous and serous membranes into the process of the disease, and thereby cause important groups of symptoms. Diseases of lymphatic glands are sometimes limited to one or a few glands, sometimes extended to a whole group, as to the bronchial, cervical, mesenteric, inguinal glands, etc., or finally, extended over the whole lymphatic system, in which case we notice a successive wandering from one part to another.

The course of diseases of lymphatic glands and vessels is either acute or chronic, often existing for years. In acute cases (inflammations) the local process of the disease is often accompanied with more or less violent fever, which takes a decided typhoid or nervous character, if the cause of the disease lies in the resorption of virulent or putrid matter. Tubercular and cancerous affections of the glands occasion hectic fever; besides, we observe in chronic affections of the lymphatic glands (hypertrophy, indurations, tuberculosis), particularly if much extended, a rapid and marked disturbance of hæmatosis; an anæmic condition with all its sequels and symptoms.

ATROPHY OF THE LYMPHATIC GLANDS.

This disease appears mostly in aged people in consequence of marasmus, or in general tabes in consequence of consumptive diseases. Atrophy occasions an abnormal minuteness of the glands. It affects the gland sometimes wholly, sometimes only in single parts. The atrophied parenchyma shrinks to a hard, leather-like tissue, of a reddish-brown color, in which the capillary blood and lymphatic vessels are totally extinct. The lymphatic glands shrink likewise in consequence of inflammation, and particularly in consequence of specific processes of inflammation, as, for example, the syphilitic, etc.

We find also a cause for atrophy in typhoid disease of the mesenteric glands; in which case not only the product of inflam-

mation, but also the parenchyma becomes resorbed. And this atrophy causes, as a consequence, immense disturbances in the nutrition of the whole organism.

INFLAMMATION OF THE LYMPHATIC GLANDS (LYMPHADENITIS).

This inflammation is sure to arise as soon as virulent or putrid animal matter becomes resorbed by the lymphatic vessels, *p. e.*, the reception of syphilitic virus from a primary syphilitic ulcer, of pus from vaccina or variola-pustules, of poison from cadavers (dissection, autopsy) or from pest-carbuncles, of snake poison, of discharges from mortified parts, etc. The disposition to become diseased in this manner with lymphadenitis is very general; whatever the constitution, the age or the sex of the individual may be, as soon as any of the above causes has taken effect, inflammation of the lymphatic glands will be the result. Only every now and then we find persons who seem to have an immunity against infections, *p. e.*, in my own experience I know of two fellow students who repeatedly were wounded in autopsies, yet never showed any ill effects therefrom. And the same I have observed in syphilitic infection. Others, on the contrary, become at once most violently diseased, even after the most insignificant exposure to such influences.

The purulent products of a lymphadenitis, produced by resorption of virulent matter, can become virulent, and, transferred to another individual, create the same disease. This is particularly the case in syphilitic lymphadenitis.

The so-called scrofulous affections of the lymphatic glands, which are so often seen among children, arise certainly in an analogous manner, in so far as the inflammation of the parenchyma of the lymphatic glands is derived from the influence of a strange, irritating substance contained in the channels of the lymphatic glands. Here the possibility is existing, that even an abnormal condition of the lymph itself may irritate the lymphatic glands and cause inflammation. And such a condition can easily be caused by an improper nutrition of the infantile organism. Yet surer and oftener we can prove in

scrofulous lymphadenitis as a cause, a peripheral, hyperæmic, exudative, or ulcerative process (situated sometimes in the epidermis, sometimes in the mucous membrane), from which fact we may justly conclude that the existing inflammatory affections of the lymphatic glands are the consequences of changes of texture and their cause a resorption (by the lymphatic vessels) of the products of the same (pus, ulcerous secretion, purulent mucus, etc.), although these carry in themselves neither specific, virulent, nor septic properties. So we also find quite commonly inflammations of the glands of the neck in consequence of different eruptions of the face, head, and ears, conjunctivitis, catarrh, and ulceration of the mucous membrane of the nose and mouth; inflammations of the axillary glands in consequence of panaritium and inflammation of the nails, of inflammatory and ulcerative affections of the skin of the hands and arms, and the mammæ; inflammations of the inguinal glands from the same affections of the lower extremities, the genitals, and from acute and chronic catarrh of the mucous membrane of the vagina and rectum. If such a peripheric evil covers a large part, *p. e.*, both legs or arms, then the corresponding lymphatic glands become diseased; in a general diffusion of an exanthem, as in prurigo, we will find the lymphatic glands everywhere in an inflammatory condition. In cases of so-called scrofulous lymphadenitis, where we miss such a preceding peripheric affection, we must take it for granted that the cause for the latter is often of a volatile nature, or that it may have been healed or have disappeared, while the consequence, swelling of the lymphatic glands, continued independently. The same holds good in certain syphilitic swellings of the lymphatic glands, in the so-called "Bubons d'emblée," where a preceding primary affection (producing the syphilitic pus) is either denied, or has been so insignificant that it has not been noticed by the patient.

In regard to the frequency and surety with which lymphadenitis appears after such peripheric changes of tissue, I have to remark, that in this respect there exists a great diversity, resting on individual circumstances; thus we meet children who suffer at once most intensely from swelling and inflammation of the glands in consequence of the mildest nasal catarrh, a passing

exanthem of the skin, etc.; while, on the other side, we meet others, where a severe peripheric affection has existed for a long time without affecting the lymphatic glands in the least. Of course, between both extremes lie many divisions of gradation. And furthermore, we cannot deny the fact, that such a sensibility of the system of the lymphatic glands is often hereditary; though far oftener produced by bad influences (improper nutrition, lack of sunshine, etc.).

The disposition to become afflicted with lymphadenitis usually ceases with the full development of puberty; only occasionally do we find a case extending into womanhood or manhood.

The hypothesis of a constitutional disposition to inflammation of the lymphatic glands (formerly called the scrofulous or lymphatic) cannot be denied; while a specific disease of the blood, a scrofulous dyscrasia, which many accept, has not been proved.

Inflammation of the lymphatic glands has often been observed as a sequel of severe acute diseases of the blood, particularly of the acute exanthems, of the typhus and puerperal fevers. The manner of origin of such a lymphadenitis is the same as above mentioned, namely, by resorption of products of inflammation from any one of the manifold exudative processes caused by such dyscrasias of the blood; the latter heal, while the inflammation of the lymphatic glands continues, and runs its further stages as an independent malady, after the primary affection has run its course. Such inflammations of the mesenteric glands which accompany typhous affections of the intestines, arise also by resorption of the inflammatory exudation deposited in Peyer's follicles; in an analogous manner arise the inflammations of the bronchial glands which frequently accompany severe cases of pneumonia.

Furthermore, we find frequently a rheumatic lymphadenitis caused by a sudden suppression of secretion of perspiration, and it is not unlikely that such cases may also be caused by resorption of products of inflammation from a primary, peripheric rheumatic affection (a serous infiltration in the subcellular tissue, between muscles, etc.). Some physiological processes will cause inflammation of the lymphatic glands, as teething and growing, also severe bodily fatigue, *p. e.*, after a severe march.

We have two forms of lymphadenitis—the acute and chronic.

In the acute form we find the following pathological changes: The parenchyma of the gland is injected, reddened in different nuances, the gland is swollen, soft, and friable; its tissue is either uniformly infiltrated by more or less exudation, or in single points or parts in larger quantity; sometimes we find in the parenchyma of the glands small hemorrhagic extravasations. The surrounding cellular tissue takes more or less part in the inflammatory process; it is reddened, infiltrated with a thick exudation, and also not seldom the seat of small, bloody extravasations. The inflamed gland at once becomes united with the inflamed and infiltrated cellular tissue. These changes cause the following symptoms: Excessive pain over the gland, which is still more intensive when the inflamed gland lies under a tense aponeurosis; the pain is increased by pressure, and by motion of neighboring parts, *p. e.*, of the arm in inflammation of the axillary gland, of the leg in inflammation of the inguinal gland, etc.; quick-following hard swelling of the gland and the surrounding tissue, to the size of a walnut and even a hen's egg (bubo); if the gland is superficially situated, we find the epidermis swollen, with concurrent erythema. The patient, in the beginning of the inflammation, feels chilly, followed quickly by fever, loses the appetite, has a coated tongue, excessive thirst, restless sleep, and dry skin.

Acute lymphadenitis ends frequently in complete absorption. In such cases the swelling decreases in a few days, and the gland reaches quickly its normal volume; pains cease, motions of neighboring parts become free, fever subsides, and in a short time the patient is convalescent. Yet far oftener is it that acute lymphadenitis ends in suppuration, forming an abscess of the gland, particularly when there exists in the surrounding cellular tissue a copious exudation. In such a case the cellular tissue is the principal seat of suppuration, while the gland itself changes to a decayed, infiltrated, and shrunken body, in which every part of the texture of the gland is lost, and which, after the opening of the abscess, either is expelled with the pus or remains in a completely atrophied condition. Sometimes the gland itself becomes suppurated, and then a real phthisis of the gland is

originated. In such circumstances the pains are increased to a considerable height, under continued fever, become throbbing and beating, and the skin reddens deeper; the swelling which was hard in the beginning becomes softer on one place, the reddening of the skin on such a place more yellowish and thinner, and finally the abscess breaks. After complete discharge of its contents the walls of the abscess sink, and heal by adhesive inflammation; at the same time all other disturbances disappear. Yet frequently the healing process is retarded, and particularly so when the opening of the abscess resulted spontaneously and rather late, in consequence of which the epidermis became undermined to a greater degree, and the more or less infiltrated and bloodless flaps of cutis fall off, leaving a space to be filled by granulations. Or, the abscess, instead of opening outwardly, sinks deeper to find an outlet at a less or greater distance from its original seat, causing thereby suppuration of cellular tissue, or forming a fistular channel. In lymphadenitis which results in suppuration we very rarely find pyæmic infection of the blood. Under unfavorable external as well as internal conditions (particularly dyscrasia), the inflammation of the gland and its cellular tissue can change into mortification. This often results in death, under symptoms of an adynamic fever; or, in more favorable cases, the mortified cellular tissue and the morbidly destroyed gland, with the supervening epidermis, sloughs off, and the reproduction of the large loss of substance takes place by granulation.

Furthermore, we observe sometimes, as a result, induration of the gland, in consequence of the exudation in the gland and cellular tissue becoming only partially resorbed, while the larger part changes into a fibroid callus.

Under such circumstances, the pain, tension, and fever decrease; so also the inflammatory swelling, although the latter not entirely, leaving for some time a tumor, which shrinks gradually to a round, hard, and resistant knot, after which no further changes can be noticed. Finally, some cases of lymphadenitis, which had begun in an acute form, with fever, severe pain, etc., change later to a slow course, or the chronic form.

Chronic lymphadenitis is either the result of the acute, or is

chronic from the beginning. We find it often, particularly in scrofulous subjects, caused mostly by peripheric affections of a chronic nature (ulcers of the skin and diseases thereof, catarrh); and also in general lues venerea. Lymphadenitis, developed as a sequel of acute exanthemata, typhus, and other maladies, is very apt to take a chronic form. When the inflammation takes on a chronic form from the beginning, then a gland or a group of glands swell slowly and gradually and without pain, and even by pressure the swelling is without the sensation of pain (indolent bubo); the motions of neighboring parts are undisturbed; no fever accompanies the slowly resulting infiltration; the epidermis over it is unchanged, and without a trace of inflammatory hyperæmia. After several weeks, or even months, the exudation may be resorbed, of course, as slowly as it came, and the swelling of the gland disappear. Sometimes we may observe, during a quicker course of lymphadenitis, a change of exacerbation and remission, so that the enlarged gland for some time decreases, but, in consequence of renewed hyperæmia and exudation, it soon increases again to its former volume. Such exacerbations may be caused by colds, faults in diet, bodily fatigue, etc. Most of such tumors of the glands result in a permanent induration, after which no more changes take place.

Sometimes chronic lymphadenitis (particularly in scrofulous subjects) ends in suppuration, the beginning of which is preceded by a lively hyperæmia, larger swelling of the gland and its cellular tissue, reddening of the epidermis and acute pains; yet this process is less rapid here than in the acute form; at times suppuration begins at different points of the exudation, and on such places the abscesses will open. It happens frequently here, that after the discharge of the thin and watery pus, the closing of the abscess is retarded, and fistulous furrows, or open, so-called scrofulous skin-ulcers are formed, after the final closing of which always remain deep and disfiguring cicatrices; and these processes we can observe mostly on the glands of the neck. The same process can be observed in lymphadenitis which began acute and ran into the chronic form, so that, after a time, we can see no difference from the one which had a chronic course from the beginning.

HYPERTROPHY OF THE LYMPHATIC GLANDS.

Hypertrophy of the lymphatic glands is an increase of their parenchyma, thereby causing an abnormal size of these organs. We must exclude, therefore, all those increases of volume in the lymphatic glands which are the consequences of exudation, infiltration, or new formation. The microscopical examination shows in the genuine hypertrophy only the normal elements of the gland, and the total absence of any pathological new formation. In the interior of hypertrophied glands, we observe a reddish-white, somewhat flabby parenchyma, from which is discharged, by pressure, a watery and somewhat turbid fluid. This disease is mostly found in childhood, in individuals of a so-called lymphatic habitus, although we may see it sometimes even in manhood. Sometimes it attacks only certain parts of the system of lymphatic glands (*p. e.*, those of the abdomen), at other times extends over the whole system (even to the glands lying in the cavities of the body).

Hypertrophy of the glands first causes uneven, not painful, not very hard, rather soft swellings, of the size of a pigeon's egg; similar swellings can be formed in the lumbar, mesenteric, epigastric and bronchial glands.

This hypertrophy of the lymphatic glands is a disease which develops slowly and gradually, is chronic, and may exist for years. Often we observe with it a hypertrophic development of other blood glands, as of the thyroid and spleen glands; sometimes also a checked involution of the thymus.

The consequences of an extensive hypertrophy of the lymphatic glands we find in the blood, and as such, has been observed a particular form of leucæmia, the so-called lymphatic, caused by an immense compilation of formations, which are analogous to the parenchyma-corpuscles (so-called "lymph-corpuscles"); while in the so-called lienal leucæmia (a sequel of chronic tumors of the spleen), we observe in the blood formations which are analogous to the constituents of the pulp of the spleen. Even in cases of primary hypertrophy of the lymphatic glands which is combined with hypertrophy of the spleen, the developing

leucæmia shows more the lymphatic character, so that the parenchyma-corpuscles predominate in the blood.

CANCER OF THE LYMPHATIC GLANDS (CARCINOMA GLANDULARUM LYMPHATICARUM).

Cancer of the lymphatic glands is sometimes primary, sometimes secondary. The former is a very rare malady; its form is the soft, white medullary, or melanotic, and sometimes combined with alveolar cancer and with cyst formation. Very rarely one gland alone is cancerously diseased; far oftener a whole gland group, and in some cases the cancerous degeneration is diffused over the greater part of the gland system; and, if so, then not only the superficially situated glands are the seat of the new formation, but also the glands of the breast, and of the cavity of the abdomen. In such a general diffusion of cancer, its development is mostly acute.

The primary cancer of the axillary, inguinal, and cervical glands forms a swelling of soft consistency, even at times giving the feeling of fluctuation; the tumor is smooth and even if only a single gland, uneven and rounder if a whole group of glands are cancerously diseased; its size can reach that of a fist. The swelling is movable, the epidermis over it in the beginning unchanged; on pressure it is painful, in rapid growth it may also be the seat of spontaneous pains. Besides this, we find the general symptoms of cancer present, and these the more intense and marked, the larger the diffusion of the cancer over the lymphatic system is, and the more rapid its growth; quickly resulting marasmus, cachectic appearance of the skin, hectic disturbance of digestion and sleep, decrease of strength, wandering rheumatic pains in the members, chest, and abdomen, etc. In the last stages of the primary cancer of the lymphatic glands we find it often combined with cancerous new formations in the thyroid gland, the spleen, the lungs, the liver, etc. In a luxurious growth and a large diffusion of the cancer in the glands, the subjects die in the course of two to six months, in a condition of excessive marasmus and cachexia from exhaustion, before any further metamorphosis is produced in the cancerous swellings;

otherwise cancer of the lymphatic glands becomes purulent, and the covering skin reddens and finally breaks. By direct contact with the atmospheric air the cancer quickly forms an ulcer, on which secondary deposits, cancerous granulations, luxuriantly grow. Like all carcinomatous ulcers, it becomes the seat of frequent and emaciating hemorrhages.

Death generally results in consequence of exhaustion and consumption. Only in a few cases, some physicians will have seen cicatrization after removal of the cancerous tissue; and before ulceration existed will have observed in the cancer a retrograde metamorphosis, the formation of a so-called "reticulum," and consequently a shrinking of the neoplasma.

Far more frequent than the primary is the secondary cancer of the lymphatic glands. As such, it appears principally in the later course of a cancerously diseased organ, in the lymphatic system belonging to such organ. We find that, to cancer of the glands of the breast, usually is added cancer of the axillary glands; to cancer of the uterus, testiculi, rectum and vesica urinaria, cancer of the inguinal glands; to cancer of the tongue, cancer of the submaxillary glands, etc. The same we notice in the primary formations of cancer of the inner part of the body; cancer of the œsophagus and the lungs produces cancer of the bronchial glands; cancer of the stomach, liver, and intestines produces frequently cancer of the mesenteric and of the retroperitoneal glands.

Secondary cancer of the lymphatic glands remains usually limited to such a group of glands as are analogous to the primary diseased organ, and yet, at times, extends to the lymphatic system in general, so that, *p. e.*, in primary cancer of an organ situated in the abdominal cavity, gradually all glands lying along the vertebral column become diseased, and, finally, cancerous swellings become visible even in the cervical glands. The secondary cancer of the lymphatic glands develops in particular after ulceration has begun in the primary cancer, in which case the lymphatic vessels, by suction, carry the cancerous elements to the neighboring glands; and yet there have been observed cases of secondary cancer without a previous ulceration of the primary. This fact of resorption of cancerous elements by the lymphatic vessels has been anatomically proved.

In regard to the form of secondary cancer of the lymphatic glands, it may be said that it is governed by the primary, so that, if the primary affection was a scirrhus or a medullary cancer, the secondary formation of cancer will offer either a hard, fibrous, or a soft medullary structure. The growth of secondary cancer of the lymphatic glands is not as rapid as that of the primary, and in size it rarely reaches to such a degree as the latter.

TUBERCULOSIS OF THE LYMPHATIC GLANDS.

Tuberculosis is, next to inflammation, the most frequent form of disease of the lymphatic glands. It is often a primary tuberculosis, and as such attacks either only a certain division of the lymphatic gland system, *p. e.*, the bronchial, mesenteric or cervical glands, or it attacks the gland system in its entire extent. As a primary malady, tuberculosis of the lymphatic glands is predominantly a disease of childhood, existing principally during the first years of life. Often we find here an hereditary disposition to tuberculosis, transmitted from tuberculous parents to children. External causes are found in an improper nutrition of the infantile organism.

We see mostly such children afflicted with it who are not nursed at the breast, and do not receive sufficient pure cow's milk or other animal nutriment, but instead a great quantity of material containing starch, as potatoes, fresh-baked bread, corn-starch, maizena, etc. The effect of such injurious influences is increased if children are exposed to other causes injurious to the process of growth. To these belong particularly the residence in sunless, cold, and damp houses, and the lack of fresh air. Children living under such unfavorable circumstances, commonly become diseased with tuberculosis of the lymphatic glands; and even in adults the same observation has been made, although in such tuberculosis affects mostly the lungs. After a course of a sometimes longer, sometimes shorter period, during which tuberculosis of the lymphatic glands has existed isolated, tuberculosis of other systems and organs is added, in particular those, when the causes continue, which produced tuberculosis of the lymphatic glands, the primary state of which forms the source of secondary

tuberculosis of the lungs, the spleen, the serous and mucous membranes, and the brain and its membranes. In children we see frequently rachitis combined with primary tuberculosis of the glandular system. We find tuberculosis in the lymphatic glands, just as in all other organs, in two different forms; that is, as miliary and as infiltrated tuberculosis. The first forms the well-known (single or multiple gray kernels resembling millet-seed) tubercle granulations, which we meet most frequently in the bronchial glands in combination with miliary tuberculosis of the lungs. It is rare.

The infiltrated form of tuberculosis of lymphatic glands is by far more common, and, like tubercular infiltrations of other organs, is the product of inflammation. Its formation is always preceded by an inflammatory hyperæmia, and a deposit in the parenchyma of the lymphatic glands of an originally soft, jelly-like, grayish-red exudation, in consequence of which the diseased gland, at this stage of the malady, is more or less swollen, and the surrounding tissues take more or less part in the inflammation. This soft exudation is, without doubt, frequently completely resorbed, after which the gland returns to its normal size and structure, otherwise it changes quickly to the so-called yellow tubercle-mass, and then represents the infiltrated form of tuberculosis of the lymphatic glands. Sometimes we find the metamorphosis of the inflammatory product in its different stages, side by side; sometimes the still fresh, soft, reddish exudation, and the transforming stages into tubercle mass, or otherwise, the already developed, yellow, raw tubercle. In glands lying directly under the epidermis, such as the cervical glands, we can frequently make the observation that, in one or more of the same results resorption of the inflammatory exudation, while in other glands diseased at the same time and under the same circumstances the product of inflammation changes into tubercular mass. If tuberculization of an exudation has fully developed in a lymph gland, then such an organ shows itself changed into the yellow, hard, cheeselike and blood-poor tubercle mass, without a trace of the normal parenchyma of the gland being left; yet sometimes the new formation is only found in a few places, heaped into larger or smaller, irregularly round, yellow lumps,

while the other texture of glands shows no further disturbances, a condition which seems produced by the change of the gray miliary tubercles into yellow mass. The more tubercular mass is deposited the more the glands are swollen, and they often reach, by infiltration, the size of a walnut. Such tubercular gland swellings we can see like knotted strings along the jugular vessels of the neck, in the bronchiæ, along the trunks of the vessels of the vertebræ, in the region of the stomach, the gall-ducts, the pancreas, the inguinal region, etc. Tubercular granulation in the lymphatic glands scarcely ever causes any symptoms; tubercular infiltration, on the contrary, causes symptoms of inflammation of the lymphatic glands. Accordingly we find in the glands which lie directly under the epidermis, painfulness, more or less swelling, and finally induration of the tumor. Yet these symptoms scarcely differ in any way from a simple inflammation of the lymphatic glands resulting in induration, and nothing particular is presented from which we could diagnose at once the tubercular nature of the malady; this we only can do, in considering all those circumstances under which resulted the inflammation of the glands and the infiltration of their parenchyma. So we have to diagnose, *p. e.*, a swelling of the lymphatic glands, not as a simple, but a tubercular one, as soon as this is added to an already existing tuberculosis of another organ. Just so we may guess with great probability of the tubercular nature of existing tumors of the lymphatic glands, even in proved absence of a primary tubercular disease, as soon as the patient suffers from marasmus, anæmia, or a cachectic condition, and still is at the age of childhood, etc.

Of course, of internally situated lymphatic glands, direct symptoms of a tubercular infiltration are scarcely ever noticed. In some cases, by great emaciation of the abdominal walls and large swellings of the mesenteric glands, we may feel these as tumors. Tuberculosis of the deeply situated glands causes numerous indirect symptoms, by the inflammatory condition of the neighboring mucous and serous membranes, *p. e.*, of the peritoneum and the mucous membranes of the intestines in tuberculosis of the mesenteric glands, of the mucous membrane of the bronchiæ and the pleuræ, in tuberculosis of the bronchial

glands, etc. Yet even these symptoms have nothing characteristic of tuberculosis of the named organs, and we can only diagnose the existence of a tubercular affection of these glands, with more or less surety, under a careful consideration of all anamnestic circumstances, the condition of nutrition of the patient, etc. Besides, tubercular swellings of the glands, just like tumors of glands of another character, can exercise a pressure upon neighboring organs, and thereby produce other symptoms, *p. e.*, on nerve-trunks, by which is caused pain and paralysis of neighboring branches of nerves, on channels, *p. e.*, the gall-ducts, whereby jaundice may be caused, or on veins, which may originate hydropic exudations, etc.

In regard to the further course and the results of tuberculosis of the lymphatic glands, I will say that the red hard tubercle mass deposited in the lymphatic glands, just as in other organs, earlier or later softens, and forms a phthisis of the glands. If so, there results in the circumference of the gland a more or less violent inflammation, the products of which form pus, unite with the softened tubercle mass, and finally form an abscess. The further course is different according to the situation of the gland. In superficially situated glands, the abscess, as a rule, opens outwardly; yet after the discharge there follows but rarely a quick closing; and instead of which a fistulous ulcer is formed, which secretes a thin pus mixed with remnants of tubercular matter.

The surroundings of this ulcer remain more or less hard, infiltrated, swollen, the skin is reddened, and exacerbations and violent hyperæmiæ periodically appear, whereby are caused greater softening of the deposited exudation, and an increased discharge from the ulcer.

Abscesses of the lymphatic glands in the cavities of the body, can discharge into the analogous cavities, as the pleura or peritoneum; or into surrounding channels, as into the bronchiæ or the intestinal canal; yet, in proportion to the frequency of tuberculosis of the lymphatic glands, such results are very rare.

In most cases tuberculosis of the lymphatic glands is fatal, particularly so in combination with other, either pre-existing or consecutive, tuberculosis of the lungs, the membranes of the brain, the serous membrane, the bones, etc.; in rare cases of great

diffusion, it will be fatal by tabes and general consumption; or, finally, discharge of tubercular abscess of the lymphatic glands into the cavity of the abdomen or the sac of the pleura, into the bronchiæ, etc., may cause death.

Yet, next to tuberculosis limited to the apices of the lungs, none is so often cured as tuberculosis of the lymphatic glands, particularly in children. In external glands this process of healing goes on in the described manner by the discharge of the tubercle matter changed to pus, and gradual closing of the abscess; in the deeper glands, tuberculosis is healed most frequently by calcification of the softened tubercle matter, and shrinking of the same to a hard concretion, colored by pigment, and surrounded by a fibroid capsule. In the peripheric glands this process of healing by calcification is less often observed, while in the deeper glands, as the bronchial, at times a discharge of the softened tubercle matter to the outside takes place by perforation through the bronchiæ, and a closing of the abnormal opening and cavern of the gland.

With the healing of tuberculosis of the lymphatic glands very often the tubercular disease has entirely ceased; yet at other times we can observe after this fortunate result has been reached, that a tuberculous affection in other organs (lungs, bones) develops and destroys the patient.

INFLAMMATION OF LYMPHATIC VESSELS (LYMPHANGITIS).

This inflammation is more frequent in youths than in adults. It is originated by the same causes as stated in the inflammation of the lymphatic glands; particularly is the reception of septic or virulent matter in the lymphatic vessels a cause; at other times only simple peripheric lesions of those parts from which lymphatic vessels arise, give cause to their inflammation, *p. e.*, excoriations of the skin, wounds, blisters, etc.

The anatomical changes of inflammation of the lymphatic vessels are the following: Injection and reddening of the cellular tissue of the vessel; often in it, and under the inner tunic, small ecchymoses; infiltration of the cellular tissue with serous or seropurulent or puslike exudation; vascularity and infiltration of

the cellular tissue surrounding the vessel; sometimes we find along the trunk of the vessel small abscesses.

The inner tunic of the vessel is without gloss, of subdued hue, rough, slightly wrinkled; the membranes in general are thickened, loosened, and friable; the inflamed vessel is dilated and varicose. Even its channel is filled with exudation, sometimes with coagulated plugs, or with puslike products of inflammation.

In inflammation of superficially situated lymphatic vessels, reddened stripes or cords arise on the skin, parallel with the course of the vessel and extending to the next lymphatic gland, which are very painful by pressure. These are missing as soon as the inflamed lymphatic vessels lie deeper. The part in which the inflamed lymphatic vessel ends, as an extremity, is œdematously swollen, tense, and its motion difficult and painful. Fever is generally present, which partakes of a decided nervous character if the inflammation is caused by septic or virulent matter. Usually soon after the next lymphatic gland becomes diseased, and then generally passes by a rapid process into suppuration. With this the inflammation generally ceases. Infection of the blood with pus results here much more rarely than in inflammation of the veins, and the more so, the greater the distance is from the process of inflammation to the entrance of the ductus thoracicus into the venous system.

In lymphangitis resorption is not rare. If resorption occurs, then a restoration of the calibre of the vessel, a decrease of the œdematous swelling, of the pain, of the streaky redness of the skin, of the fever, etc., takes place. Sometimes we observe as a result obliteration of the vessel, by the deposited exudation becoming transformed into fibroid tissue. Suppuration is not infrequent. This results less from the pus contained in the channel of the inflamed vessel, than for the reason that the deposited exudation in the surrounding cellular tissue melts, running together in an abscess, whereby the walls of the inflamed vessel become mortified. If the change of the exudation into pus results quickly and completely, and the abscess is opened outwardly either by nature or the lancet as soon as formed, then the affection is ended in a short time by closure of the cavity of the ab-

scess; but thereby, as a matter of course, a part of the inflamed lymphatic vessel is destroyed. In other cases, suppuration takes place very slowly and only partially, several small abscesses are formed, which break, discharge for a considerable time a thin pus, and which are surrounded with hard infiltrated cellular tissue; the skin remains on these places more or less reddened, painful, and the whole part is tense and swollen. In such cases consumptive fever is added, which weakens and reduces the patient.

Finally, we find as a result of acute lymphangitis, induration and thickening of the walls and valves of the lymphatic vessels, which we can recognize externally through the skin as hard, more or less painful cords and knotty swellings; often we can observe a chronic infiltration and induration of the surrounding cellular tissue of the inflamed lymphatic vessels, and a chronic inflammation of the epidermis covering the same, which is manifested by redness, thickening, and induration, sometimes diffusely extended, similar to elephantiasis arabum, sometimes limited to single parts, and then named as erythema nodosum, or tuberculosum. In such cases the next lymphatic glands are swollen and indurated.

Hendy, Alard, Henle, and Bardeleben are of the opinion that elephantiasis (particularly the so-called "leg of Barbadoes," attacking patients with a great deal of fever), arises from an inflammation of the lymphatic vessels with a subsequent atrophy. G. Simon, Förster, and others consider this very doubtful. These observers found that every attack began with inflammatory swelling of the lymphatic glands, and the well-known red streaks in the skin extending from the iliac region to the thigh, which soon was followed by an inflammatory swelling of the whole thigh, and which never entirely disappeared. Others observed in cases of elephantiasis, that blisters were developed on the skin, which contained a fluid similar to lymph, so that the conclusion was made that the cause of formation of blisters rested in an atrophy of the lymphatic vessels. Yet all these views and theories lack an exact foundation.

From insufficient activity of the lymphatic vessels the following diseases may be caused: Phlegmasia alba dolens in lying-in women; induration of the cellular tissue in newborn infants;

epidemic angina parotidea, and nearly all sorts of exudations and swellings in which the cardinal symptoms of inflammation are missing.

I will give now a passing thought to the glandula thymus, which exists in full development only in the embryo and in life to the end of the second year, when it begins to disappear; at puberty but very little trace of it can be found; only in very rare cases does it persist beyond this period to greater age.

Hypertrophy of the thymus has been observed, without change of texture. This organ undergoes already in normal condition many changes in size and weight; in newborn infants it can be very small, weighing from ½ to 5 drachms; at the end of the first or second year about 250 grains; if enlarged it will occasion by its pressure on the bronchiæ and the larger vessels disturbances of breathing and circulation, causing thereby the so-called asthma thymicum. According to Rokitansky the enlargement is almost always found combined with a diseased state of the whole lymphatic gland system, rachitis, and hypertrophy of the brain.

Inflammation, with swelling of the thymus, and subsequent suppuration, have been observed in some cases; sometimes it was idiopathic, sometimes metastatic. Tubercular deposit has also been found in the thymus.

LEUCÆMIA (VIRCHOW); LEUCOCYTHÆMIA (BENNETT).

By this name we indicate that condition of the blood in which it shows a considerable increase of the colorless or white blood-cells, in consequence of which the blood assumes a grayish-red color, similar to bloody pus. An increase of the colorless blood-elements we find in a low degree also in other physiological conditions, as in pregnancy, childbed, after large exudations, loss of blood, etc. But as an increase of the colorless blood-corpuscles* to $\frac{1}{10}$ or ½ of the whole is combined in most cases with a chronic swelling of the lymphatic glands, or the glands of the spleen, independent of causes known to us, and as physiology has proved (at least) the importance of these glands for the new

* The proportion of the colorless to the colored blood-corpuscles in the physiological condition, according to Moleschott and Donders, is = 1 : 400.

formation of blood-corpuscles, so we begin now to comprehend by the name "leucæmia" an independent process of disease, whose principal symptoms are just that enormous increase of colorless elements of the blood, and the chronic swelling of the spleen, or of the lymphatic glands.

Bennett was the first physician who made known (1845) some cases of enlargement of the spleen, with presence of "pus in the blood," as he expressed himself. Virchow observed in the same year analogous cases; proved the morphological identity of the pus and colorless blood-cell, and its relation to hypertrophy of the spleen. He had then, and more so later (*Virchow's Arch.*, V, 1), extensively investigated the relations of the blood constituents to the blood and lymphatic glands. On the other side, Bennett and his countrymen have richly contributed material by analysis of the blood. A diagnosis in life was first made in Germany by J. Vogel, in an excellently observed case. (*Virchow's Arch.*, III.)

We must accept two forms of leucæmia, the lienal and the lymphatic, accordingly as only the spleen or the lymphatic glands are hypertrophied; though in many cases the swelling extends to both organs. In regard to the relation of leucæmia to pyæmia, I can only remark, that in the latter there exists also an increase of the colorless blood-cells, morphologically not differing from the pus-cells, but that there is missing the characteristic general hypertrophy of the glands, while, on the other side, in almost all cases of leucæmia no deposit of pus in any part of the body, and no trace of inflammation of veins can be found.

Leucæmia is considered generally as a rare disease, although I think that if the microscope were more used by practicing physicians, we should find it more common. In the last thirty years not more than about fifty cases (partly observed with excellent care) of leucæmia have been reported by Germans, French, and English. It attacks oftener the male than the female sex, and particularly during the ages between 30 and 60, and mostly people who live under unfavorable dietetic conditions. In some cases it was preceded by intermittents (in four cases longer than four years previous).

Among the symptoms of this disease the most noticeable is the

enormous enlargement of the spleen, or of the lymphatic glands, usually also combined with an increase of the volume of the liver. Uhle has proved in one case observed by him, a gradual, enlargement of the liver, while there was already existing a considerable swelling of the spleen, with leucæmic blood constituents.

The swelling of the named organs develops slowly (in the course of five to twelve months), mostly without pain, so that patients complain of nothing else but of a feeling of pressure and heaviness in the abdomen. This feeling is increased after meals, as in all other tumors of the abdomen, and prevents the patient from eating much at a time. Appetite is usually good; stool at times somewhat constipated, though oftener, particularly towards the fatal end, diarrhœa and even bloody stools may appear. The frequent occurrence of epistaxis is remarkable. Patients look more or less pale, anæmic; brain-symptoms are generally not present, or appear at the fatal end of the disease, in consequence of œdema of these organs. Particularly remarkable is dyspnœa, from which patients continually suffer without the lungs being diseased. The urine offers no characteristics; the exhalation of the skin is increased, with sweats at uncertain periods by day or night. The temperature is usually abnormally heightened, without enabling us, as yet, to observe a regular course. The frequency of the pulse and the breathing are also increased. The closing scenes in the course of this disease are always hydropic effusions, which begin as œdema pedum, and gradually develop into anasarca, sometimes combining with ascites.

As important diagnostic points, are therefore to be considered the large swelling of the lymphatic glands, liver, and spleen (without preceding intermittens and other diseases, which carry with them, as a symptom, enlargement of the lymphatic glands); the dyspnœa with healthy chest-organs; the disposition to bleedings from the nose and the intestines; the œdema of the feet, for which no other causes can be found; but, of course, the blood and its condition ought particularly to be observed, a drop of it examined microscopically, and the process of coagulation watched. When the leucæmic blood is beaten, the upper part appears white, like pus or milk, after the sinking of the blood-corpuscles,

and the turbidity does not disappear by shaking with ether; if not beaten, the coagulated blood shows on the surface grayish-white granulations, or at least a light grayish-red stratum, which consists only of colorless corpuscles, and in such a case the serum is clear. The prognosis is unfavorable. The result has always been death, with the exception of one case reported by an American, which was stated to have been cured. (Hewson, *American Journal*, October, 1852; and *Schmidt's Jahrb.*, Bd. 78, 511, § 305.)

The disease lasts for months and years.

Many cases have only been recognized as leucæmic after death.

XXIV.

THE FUNCTIONS AND DISORDERS OF THE LYMPHATICS.

By J. D. Buck, M.D., Cincinnati, Ohio.

That the system of canals and glands known as the lymphatics, the existence of which has been demonstrated in nearly all the tissues of the body, bear very important relations to organic life, no one who has given the subject any attention can for a moment doubt.

So intimately connected are these minute structures with all histological changes, whether nutritive, reparative, functional, or pathological in character, that it cannot be doubted that a more accurate knowledge concerning them must result in better comprehension and more successful treatment of many forms of disease now often found incurable.

With this end in view, the lymphatics have been selected as the subject for special report and discussion by this bureau.

Although these structures are found distributed as generally throughout the tissues of the body, and although they are believed to be concerned in most organic processes, yet even their anatomy is not wholly known, while the functions which they perform, and the pathological changes to which they are liable, are in many cases merely a matter of conjecture.

Much difficulty attends the microscopic examination of the lymphatics, owing to the threadlike character of the tubes, and the difficulty of distinguishing between them and adjacent tissues.

The literature of the lymphatics is rather meagre, some recent

works on physiology barely mentioning them, although in some quarters the subject is beginning to receive the attention which it deserves. There has been, moreover, considerable controversy regarding their mode of origin and communication.

Among recent investigators Prof. E. Klein, Assistant Professor at the Laboratory of the Brown Institution, London, has made considerable progress, settling some points hitherto held in dispute, by corroborating the testimony of other histologists, no less than by certain discoveries, to which we shall presently refer.

Anatomical Structure.—The lymphatic system consists of certain glandular structures connected by lymphatic capillaries, and certain lacunar spaces, pouches, or irregular excavations, which correspond to interstitial spaces, and afford a nidus for the debouching of capillary bloodvessels.

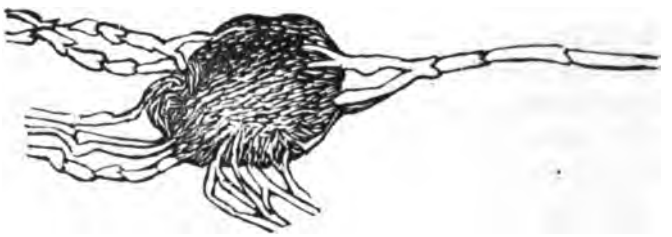
Lymphatic Vessels vary in diameter from one-tenth to one and a half lines. The medium-sized tubes, according to Kölliker, and all the larger ones, according to Recklinghausen, are composed of three coats or tunics, viz., the *tunica intima*, *tunica media*, and *tunica adventitia*. The first or inner of these tunics is rich in elastic fibres, and lined with a single layer of tessellated endothelium; the second, the tunica media, is composed almost exclusively of muscular elements; while the external tunic is formed of the surrounding connective tissue. Only the two former accompany the tube in its ramifications through the lymphatic glands.

Externally the tube presents a nodulated appearance, which is due to sacciform dilatation on either side of valves, which, like the valves of the veins, are formed by projecting folds of the internal tunic, but which are here more numerous. Lymphatics may be distinguished from the veins by their muscular coats, their lighter color, and the character of their contents, and from the arteries by their thinner walls and valvular structure.

It will be seen that in structure the lymphatic tube more nearly corresponds with venous capillaries.

The pouching of the lymphatic tube already referred to is most observable during engorgement of the vessel, and may be seen in the abdominal lymphatics during absorption of food from the intestinal tract. In the afferent lymphatic tube leading to the

gland, the concavities of the valves are turned toward the gland, which serves to facilitate movement in that direction, while in the efferent vessels the concavities are turned in the opposite direction.



Aside from the vessels possessing the definite structure already described, there are other lymph tracts which seem to be nothing more than lacunar spaces which appear to have coalesced to form wide and flat channels, and not infrequently these wide spaces envelop a plexus of capillary bloodvessels like sheaths.

"The lacunæ," says Recklinghausen, "correspond in form with the spaces between the parts of the organs they invest, such as the ducts of glands, etc. The capillary tubes, even in their finest branches, are provided with varicose enlargements, and these are often situated at the points of junction of the vessels, and these occur so suddenly that transverse processes project into the lumen of the vessel, which are again so placed that they form a kind of valve.

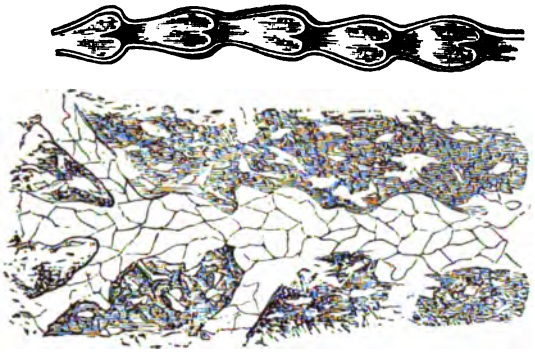
"Such dilatations often succeed one another at very short intervals, especially in those lymphatics which immediately follow the capillaries, giving the impression of tubes constructed of a series of Florence flasks, of which each is inserted by its neck into the base of the one preceding it."*

This arrangement, like the valves in other tubes possessing a more definite structure, determines the direction in which fluids will move in these lacunar spaces.

The anatomical relation existing between the lymphatic tubes and spaces and the capillary bloodvessels is very intimate. One of these relations is thus described by Dr. Klein:—

* Stricker's Histology, p. 217.

"We find, for example, a wide lymphatic vessel invaginating a venous trunk; the vein collects a small number of capillaries



which come off from a small arterial branch. The lymphatic vessel, however, does not cease to exist as such at the point where the capillaries debouch in the vein, . . . but continues on to the artery in such a way that the whole system of the capillaries is invaginated in a sacciform dilatation of the lymphatic vessel. Not till the root of the artery is reached does the lymphatic, as such, cease to exist, at which point it loses itself in the lymph canalicular system accompanying the artery."*

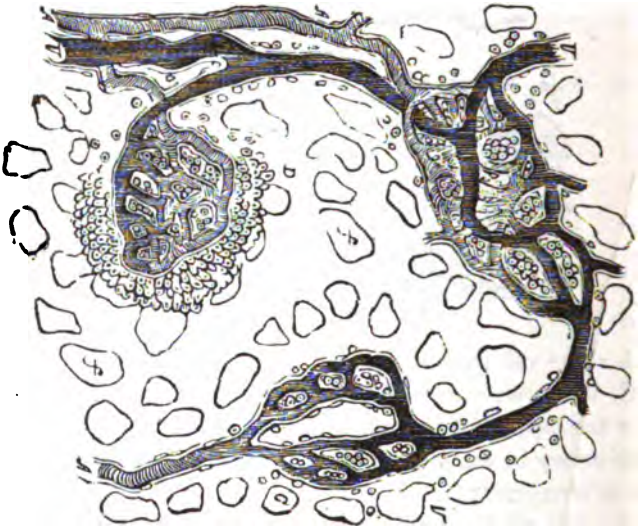
"A lymphatic vessel that simply accompanies a vein possesses a blind sacciform dilatation, in which the system of capillaries belonging to the vein is inserted like the glomerulus of a Malpighian corpuscle of the kidney."*

It may now be considered as demonstrated, that lymphatic vessels communicate freely with the serous cavities, the existence of true stomata having not only been observed in healthy serous tissue, but their rapid formation having also been noticed in peritonitis, by budding and vacuolation of cells of the matrix. These straight lymphatic tubes, which communicate with the gland, with the thoracic duct, and with the serous cavities, have a very important office in the physiology of absorption.

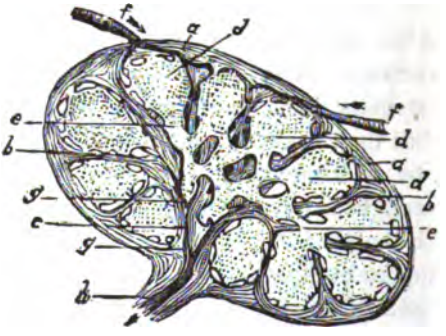
Lymphatic glands consist essentially of two substances, an external cortical, and an internal or medullary substance. The

* Klein's Anatomy of the Lymphatics, p. 37.

former partakes of the character, and is in fact composed of connective tissue; it extends into the gland, separating it into follicular spaces, and forming what is known as trabeculæ, and the



lymph path. In the dilatation of the vessels in the medullary substance is found some gland substance with a follicular cord. In the gland the lymphatic tubes are opened out; the valvular structure of the tubes already referred to being so arranged as to



insure a passage of lymph through the gland, though with far less rapidity than through the tubes.

Physiology.—The lymphatic tubes and lacunæ stand in most intimate relation to the tissues, throughout which they are interposed between tissue and bloodvessel. The lymphatics are "ministers of the interior," while bloodvessels adjust foreign relations, such as the immigration of nutritive material, oxygen, and the like, and the exportation of effete and superfluous matter.

In the formation of fibrin from albumen, no less than the production of the lymph-corpuscle, the lymphatics perform a very important office. It has not been definitely determined whether the connective-tissue corpuscle may arise independent of the lymphatics by simple cell genesis, histologists being divided upon that subject. It is not at all improbable, however, that a corpuscle coming originally from the lymphatic, may possess to some extent the power of reproduction by segmentation. When the repair of tissue is taking place, as in fractures, wounds, and ulcerations, involving not only considerable loss of substance, but necessitating a very rapid preparation of nutritive elements, such may not only be the case, but there may be an adventitious formation of the lymphatics also, as has been observed by Klein, in pathological conditions of the serous membranes.

Perhaps the most important portion of the lymphatic system is that which is found in the small intestines and known as the mesentery.

It has long been known that most substances taken as food, except saline substances, water, and other matters in intimate solution which are absorbed directly into the bloodvessels along the digestive tract, reach the circulation through the lymphatics which originate in the villi.

Until quite recently, it has been supposed that this absorption into the villi takes place solely by osmosis. That food passes through these structures has often been demonstrated by experiments on animals like the rabbit, which have been killed after feeding on fats, when the villi have been found filled and distended with fat-globules, and it has been generally supposed that these matters reached the lacteal tubes by passing directly through the walls of the villi. Several years ago, Leitzerich claimed to have discovered, aside from the spindle-shaped cells

which cover the villi, certain others which present open mouths to the intestinal tract, and through which substances might be directly absorbed. I am not aware that his observations have been verified in relation to the mucous membranes, but the observation of stomata in the serous membranes made by several histologists, renders his observations worthy of very careful investigation, and it is regarded as quite probable that the lymphatics communicate with the mucous membranes, as they have been demonstrated on the free surface of the serous cavities.

Without referring to the process of digestion in all its details, I desire to call attention to the *progressive change* which the food undergoes, from the first act of prehension to the last act of assimilation. Each portion of the digestive tract, as the mouth, the stomach, duodenum, etc., possesses not only a digestive fluid with its chemical ingredients, reactions, etc., put possesses also its so-called "organic ferment," as for example, ptyalin, pepsin, pancreatin, etc., etc., and as the food traverses the alimentary canal, it is acted on by these organic principles in succession, and at each successive stage is incorporated into their likeness, by a process which, although it may be strictly chemical, is nevertheless called catalytic. Assimilation, therefore, begins with digestion; there is no abrupt process by which, at a given point, dead food becomes living tissue. By the time the food has reached the villi in the small intestine in the form of chyle, it has become exceedingly complex in structure. The most important change which it undergoes, is that which occurs during its passage through the mesenteric glands, viz., the appearance of the chyle-corpuscle, a structure which has been designated as "living protoplasm," which, so far as substance is concerned, is sufficient for the nutrition of the tissues, and which, so far as structure goes, corresponds most nearly with their attributes. What specific act the mesenteric gland performs in bringing about this formation, is not definitely known, whether the cell substance of the follicular spaces furnishes also an organic principle, which like pepsin acts by catalysis, or whether in the dilatation of the tubes within the gland, and by a retarded flow, the elements of *time* and *space* are afforded for the completion of those processes already begun in the digestive tract, is not known.

Whatever may be the character of the action exerted by these glands on the recent products of absorption, it will at once be seen how important is the relation which they bear to nutrition, since they round into form, and put the finishing touches on that matter from which the tissues are builded. When their action is perverted or suspended, these nutritive elements disappear, and nutrition ceases, although by the conservative action of the organism, dissolution and death may for the time be averted.

When from normal disintegration of tissue, nutritive material may be set free in small quantities, or when under pressure, or other exigencies, albumen exudes from the bloodvessels, it is received into the lacunar spaces, or passes into the lymphatic tubes and through the lymphatic glands, and assists in the reproduction of the lymph-corpuscle, and these in their turn become again incorporated into the tissues. This is the art of husbandry of the organism. The tissues being the consumers, the lymphatics being the retailers, the blood current the wholesale supply, while the alimentary tract is the seaboard, the tract of communication for the incoming supply.

The functions of the lymphatics are, then, threefold. They are the principal agents of absorption;* they afford the principal means of communication, serving to bring nutritive material into intimate contact with the tissues; they convert albumen into fibrin; give rise to the chyle and lymph corpuscle, and essentially modify the elements or substances designed for nutrition, thus ministering to the functional energy and organic integrity of the system.

Pathology.—Disease of the lymphatics, like that of most other organs, may be either functional or organic, but in either case two very important, though widely different, conditions are to be observed, viz., the effects of such disturbance on the lymphatics themselves, and the effect on the organism at large.

* "Ludwig and Schwigger-Seidel already attribute to the straight lymphatics an important part in the absorption. According to these authors they are widely dilated during the inspiration position of the diaphragm, corresponding to the action of the muscles and tendons of this latter; whereas they are compressed during the respiration, the lymphatics of the pleural surface of the diaphragm being quite the reverse. Consequently, the respiratory movement of the diaphragm acts like a pump on the lymphatics." —*Klein's Anatomy of the Lymphatics*, p. 45.

Among the latter conditions we have defective absorption, assimilation, and nutrition.

The lymphatic glands are subject to numerous structural lesions. Frey* gives two general divisions of these organic changes, viz., senile, and the true pathological lesion. Of the former division he names three varieties: Fatty degeneration; pigmentation; and the change of the framework-substance (the ground-substance of Klein) into connective tissue, with the gradual destruction of the entire organ, melanosis.

In the first of these, viz., fatty degeneration, "the glandular structure disappears more and more in proportion as groups of fat-cells take the place of single cells."†

Fatty degeneration here, as elsewhere, implies atrophy. While there may be little change in the actual size of an organ, its normal tissue may almost entirely disappear, and be substituted by fat-cells, which are of course incompetent to perform the functions of the organ.

Pigmentation affects principally the bronchial glands, and is due to inflammatory irritation of neighboring parts of the lungs. The lymphatic glands are everywhere liable to be thus affected by substances passing through them, which have arrived from neighboring parts already diseased, and which, already undergoing modification of a pathological character, are incapable of being converted into healthy pabulum.

The spleen, which has been regarded both as the grave of the red blood-cells and the birthplace of the white cells, is to be considered as intimately related to the lymphatic functions. There is, however, this difference, that while, aside from the absorptive function, the lymphatics are next akin to the tissues, and are histological processes, the spleen is most nearly related to the general current of the blood, regulating the condition of both the red and white corpuscles in that fluid.

As dyscrasic conditions we have chlorosis, leucæmia, and diseases which are announced by changes in the constitution of the blood, due to perversion of the lymphatic function. The former of these, chlorosis, seems to possess pathological charac-

* The Microscope and Microscopic Technology, p. 399. † Ibid.

teristics of a general or constitutional nature, whether referable to the organs preparing the blood-cells, or to disorders of the digestive tract is not well ascertained.

Virchow believes it to be due to an imperfect development of the entire circulatory apparatus, and congenital rather than acquired.

According to Rindfleisch more than half of all leucæmiæ are purely splenetic. Quite a number of cases involve both the lymph glands and the spleen, and a few cases involve only the lymph glands.

Among the true pathological metamorphoses of lymphatic glands we have abdominal typhus, tubercle, scrofula, and cancer; in all of which, from obstructed function in the gland, we have as sequelæ defective nutrition, marasmus, and the like, with eruptive and ulcerative conditions.

It is not my purpose to go into a detailed discussion of the various pathological conditions to which the lymphatics are liable, or the secondary disturbances of the organism to which such lesions give rise.

I desire, however, to call more special attention in this connection, to that condition of the organism known in children as marasmus, and which often occurs in adults, the invasion of which is more often signalled by local lesion of living tissue, or the abdominal viscera. In bronchial or circumscribed pulmonic inflammation, we have, aside from imperfect oxidation of the blood, a melanæmic condition of that fluid which, by obstructing the capillary circulation, may give rise to hemorrhage and ulceration.

The abdominal functions of digestion, absorption, and assimilation, are at the same time perverted; there is loss of appetite, feeble digestion, while loss of flesh and enervation ensue.

In children such a condition frequently arises from intestinal irritation; marasmus ensues, and in the later stages pigmentation is very evident. In few of such cases is the local lesion sufficient to account for the fatal termination; inanition is the prominent condition, and frequently the sole cause of death.

Very few autopsies are made in cases of marasmus in children. What the condition of the lymphatic glands may be in

such cases, is not very accurately known from actual observation; but, from the great similarity of such cases, we may infer that their pathology is much the same. There is abundance of evidence that not only the mesenteric glands are involved, but that the whole mechanism of absorption is also implicated, and that the locality of the lesion is in the lymphatics. In some cases the absorbents resume their function to a considerable extent, food is taken and retained; there is little or no diarrhœa; nevertheless, the marasmus does not disappear, the brain and nervous system become involved. Convulsions and death ensue. In such cases the melanæmia, which has arisen from the local irritation in the alimentary canal, obstructs the minute capillaries of the brain and spinal cord.

In this connection, I have but a single remark in relation to the therapeutic indications in such cases. Such grave pathological conditions as those to which I have referred, when well established, offer very little hope for successful treatment. The theatre of the greatest achievement is that of the local irritation from which such conditions arise; and here specific and well-timed treatment may accomplish everything, and is in most remarkable contrast to that general system of drugging which only confirms and extends the local invasion.

APPENDIX.

DISCUSSION.

[First Day—Morning Session.]

T. P. WILSON, M.D., Cincinnati: I wish to make some remarks on these papers. The greatest encouragement a man can receive who prepares a paper for this Institute, is in the amount of valuable discussion which it may elicit. And if a paper be carefully prepared and read, and elicits no response, the preparer of that paper will probably not be inclined to spend time and labor again in the same direction.

Some time ago I filled a chair of physiology in one of our educational institutions for four or five years, and, of course, lectured on the lymphatic system. Since that time I have not paid special attention to the subject, and I was surprised, when listening to the papers read, at the extraordinary progress made by physiologists in this particular study, and I confess myself a stranger almost to many of the points presented. I happen to know that a very great deal of care has been taken in the preparation of some of these papers (I do not mean to discriminate between them in point of merit), and they show that the men of our school are reaching out in a direction that cannot fail to redound to the honor of our profession; and so surely as we carefully and faithfully investigate these subjects, as the men of other schools are pursuing them, we shall find ourselves standing head and shoulders beside them; and this will be glory for us. I hope that more of our physicians will cease to devote themselves exclusively to dealing out powders and pills, and comprehend that they are called to higher things—even to the investigation of these all-important subjects.

I greatly regret that in all the papers presented there is not one single item of original observation recorded. Some one has made all these investigations, examined these tissues, and burned the midnight oil over them, and our friends bring us the results; but for themselves they present nothing, not one original observation. I hope that at our next meeting, if a Bureau of Microscopy be organized, that bureau at least will bring to us something of original research.

WILLIAM VON GOTTSCHALK, M.D., Providence, R. I.: During last winter a case of leucocythæmia came under my hands, which is of sufficient interest to warrant its being reported at this time. The patient was a man of sixty-five years, who was taken strangely ill. His pulse was indistinct (at times there seemed to be none at all), and beat very rapidly. His general surface had the appearance of dirty white wax; his respiration was apparently oppressed, and yet there was no complaint of dyspnœa; his appetite was good, and yet there seemed to be an almost complete prostration of the vital powers. It seemed to be a difficult matter to make a satisfactory diagnosis. His urine was carefully examined, but presented nothing abnormal other than a slight excess of uric acid. There appeared to be a very great enlargement of the liver. Upon making a second examination of his person, I discovered enormously enlarged axillary glands in both axillæ, which gave evidence of having been thus enlarged, or enlarging, for a long time. I determined to examine his blood microscopically; and upon doing so found a great scarcity of red blood corpuscles, while the white corpuscles correspondingly predominated. I had never met with a case like this before, but was enabled to effect a diagnosis by the use of the microscope. I am under the impression that in the *North American Journal of Homœopathy*, of 1854, there is a case of leucocythæmia reported as cured by a physician of St. Louis, but I have not, as yet, had access to that journal. I believe that this condition of system exists oftener than we suppose; and I would advise that where we find a complete prostration of the system without apparent cause, the microscope be made use of as a diagnostic aid. About eight months ago, this same patient was operated upon by Dr. Minor, of New York, for a "small tumor near the spine," as he said. I have written to the Doctor regarding this tumor, but have as yet received no reply. I hope to make a further report of this case on some future occasion.

S. LILIENTHAL, M.D., New York: I do not agree with Professor Wilson in his strictures on the homœopathic school. If the allopathists have done something for us, we, on the other hand, have done something for them in the matter of posology and therapeutics. They have learned a great deal from us—much more than they are willing to acknowledge; and what they have learned from our therapeutics more than counterbalances whatever they may exceed us in original physiological research.

I remember seeing a case, about a year ago, with symptoms very similar to those described by Dr. von Gottschalk a few moments ago. This child had a congenital enlargement of the spleen. Its mother had had fever and ague for a very long time. There

was in both parties probably leucæmia, and certainly scrofula. The child had an abundance of spinal symptoms; and the recent researches of German physiologists have shown that with disease of the spleen there is frequently disease of the spine and cord. In this case there was a well-marked rachitic condition, with lateral curvature. The remedies were clear, even to the junior members of the class of students who saw the case, and Natrum muriaticum, followed by Calcarea carbonica, effected a splendid cure.

WILLIAM TOD HELMUTH, M.D., New York: I would inquire whether, in the present state of advancement of microscopy, it is possible to distinguish between a lymph-corpuscle, a pus-corpuscle, and a white blood-corpuscle?

F. F. DE DERKEY, M.D., Mobile, Ala.: I am sure these corpuscles can be distinguished from each other. I am not prepared to demonstrate it, of course, as we have no microscope here, and no preparations. I am satisfied that these can be distinguished by a high power.

DR. HELMUTH: I do not believe that the distinctions can be made, and I am of the opinion that the best pathologists of the day admit this to be true. The pus-corpuscle is extra-vascular, that is to say, it is outside the circulation, while the lymph-corpuscle and the white blood-corpuscle are within the circulation. This distinction enables us to make the distinction between the pus-corpuscle and the other two forms, but only by reason of situation. But when the three are examined within the field of the microscope, distinctive differences have not thus far been observed. Holmes expresses an inability to make such distinctions, and he has some claims as a microscopist.

J. D. BUCK, M.D., Cincinnati: In replying to the query of Professor Helmuth, I would say, in a general way, that I do not believe I could make any distinctions. I rise, however, to make a practical remark in relation to the reports of this bureau. On investigating this subject, it struck me as being of great importance as bearing upon the treatment of marasmus in children, and the general wasting of the tissues in other cases. I believe these conditions to be due to the imperfect functional performance of the lymphatic glands more than to anything else, and especially those of the mesentery. I have seen these cases carefully treated with medicines, in high and low potencies, without any relief being afforded; but I was led to the use of electricity with a view to exciting an increased action on the part of these glands, and with excellent results.

It is possible that I have magnified to myself the importance of this subject from having given so much attention to it; but I am fully persuaded that our therapeutics will be benefited by a

thorough knowledge of the functions and actions of the lymphatic glands. I believe that the more thoroughly we investigate and understand the anatomy and physiology of the organism, the more competent we will be to prescribe. All these studies are to be made subservient to our great therapeutic law. There seems to be an opinion prevailing in the minds of some, that such studies lead one away from homœopathy, and that such knowledge is extra-homœopathic. I believe, however, that the more we know of the human body in health and disease, the better we will be able to minister to its ailments.

S. R. BECKWITH, M.D., Cincinnati: I wish to make some remarks in reference to tumors of the lymphatics. We sometimes find tumors located beneath the scapula, inducing peculiar symptoms and attaining a great size. A surgeon of experience rarely gives a favorable prognosis in such cases, for even after their removal by an operation the growth is reproduced, and attains to still greater bulk. By their bulk and weight they may occasion a lessening of the capacity of the chest, produce displacement of its contents, and death may ensue in consequence. The papers of this bureau bring this subject forcibly before me, and I would ask these gentlemen whether they can give surgeons any hints for the cure of these disease processes, and aid in improving the prognostications concerning them.

SECTION VIII.

REPORT

OF THE

BUREAU OF PSYCHOLOGICAL MEDICINE,

G. W. SWAZEY, M.D., ... Springfield, Mass.
CLEMENT PEARSON, M.D., ... Cleveland, O.
J. H. P. FROST, M.D., ... Danville, Pa.
SAMUEL WORCESTER, M.D., ... Burlington, Vt.
C. G. RAUE, M.D., ... Philadelphia.
GEORGE F. FOOTE, M.D., ... Stamford, Conn.
T. L. BROWN, M.D., ... Binghamton, N. Y.

TO THE

TWENTY-SEVENTH SESSION

OF THE

American Institute of Homœopathy.

VOLUME I. NUMBER 3.

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VIII.	Mind Influence in the Cure of Disease,	T. L. BROWN, M.D.
IX.	Popular Psychology,	GEORGE W. SWAZEY, M.D.

V.

MENTAL DISEASES IN RELATION TO HOMŒOPATHY.

By J. H. P. Frost, M.D., Danville, Pa.

"Les symptômes de la folie sont relatifs à l'alteration de la faculté pensante, à la subversion des affections morales, aux lésions des fonctions de la vie organique."—Esquirol.

"Nemo vero fallatur, quasi minora sint animorum contagia quam corporum. Majora sunt; gravius lædunt; altius descendunt, sespuntque latentius."—Petrarch.

In modern psychological medicine no one point is better settled or more practically important than that all mental disorders result from, are connected with, or depend upon some form of bodily disease, either manifest or latent. Where insanity appears to be developed in consequence of hyperæmia, plethora, hepatic derangement, or intermittent fever, physicians of the old school seem to have succeeded in restoring the senses by phlebotomy repeated *usque ad deliquium animi*,[1]* by cold water,[2] by drastic purgatives, by quinine, or by Peruvian bark assisted by emetics.[3] When the mental disorder arises in consequence of suppression of the menses, or of the accustomed hæmorrhoidal flow, relief has been obtained by restoring these discharges.[4] *Ferrier* reports a case of furious mania in a young woman "cured by exhibiting Tartar emetic, first in vomiting, afterwards in nauseating doses."[5] *Haslam* speaks unfavorably of such treatment, and states that

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* The numbers refer to notes in the Appendix.

"in many instances, and in some where bloodletting had been previously employed, paralytic affections have within a few hours supervened, more especially where the patient has been of a full habit, and has the appearance of an increased determination to the head."[6] But when symptoms of insanity are developed from hereditary, epileptic, and other (for the allopaths) incurable bodily disorders; when they are caused by fright, violent emotions, or other purely psychical influences; when they replace previous disorders of the body, *insana mens in sana corpore;* when they become the only visible signs of *thyroid degeneration*, as in many instances of moral insanity; when they are developed after apparently perfect recovery from severe fevers;[7] and, finally, in all cases in which the delirium, of whatever kind or degree, is the only obvious disorder, the allopathic practitioner, according to his own professed principles, is left entirely destitute of any sure guide to the requisite therapeutic course.

In private practice cases of the kinds specified, and indeed all other psychical disorders which may be unaccompanied by evident physical disease, are necessarily treated in the old school on "general principles;" that is, in accordance with some common pathological theory, or in subjection to the particular "bilious" or other hobby of the individual physician. Both modes of treatment being almost invariably attended with the same result; a result which fills our asylums with patients who require little more than a few months of the indiscriminate, palliative, and repressive courses there pursued, to render them, like the multitudes who already crowd the halls and occupy the solitary cells of these institutions, confirmed maniacs, or hopelessly demented.[8] Hospitals for the sick, supported by the noblest charity—that which devotes itself to unknown sufferers—the boast of our modern civilization and the first fruits of our holy religion, *made the graves of their inmates* by means of the enormous drug-medication therein employed, become the mockery of humanity and the dread of the invalid poor.[9] In like manner asylums for the insane, in the grandeur of their architecture and in the completeness of their internal appointments, attest the noble public and private munificence by which they are founded and supported; while in proportion to their extent, to the number of their patients, and to

the perfection of the order and strictness of the discipline maintained in their midst, they must be regarded as wholesale establishments for confirming insanity and developing dementia.[10]

Coleridge's great principle of *individuation*, as the proper definition of normal life, should be kept in view in all medicinal treatment of abnormal conditions, whether physical, psychical, or both combined. *Hahnemann* taught nothing more explicitly than the necessity of closely adapting the medicine to the particular circumstances of the individual patient.[11] The hospital physician who directed his assistant to "bleed the north ward and blister the south," presents but an extreme illustration of the routine method commonly pursued in asylums for the insane. When a student of medicine, I had an opportunity to see something of the interior economy of a celebrated institution of this kind in the vicinity of Philadelphia; and I remember with what surprise I observed the sixty or seventy little mugs of solution of morphine regularly set out on trays, in the evening, to be distributed and administered as sleeping potions to a large number of the patients.[12] And I have been informed by the late assistant physician at the asylum in my neighborhood, that he employed the *chloral hydrate* in a similar manner, and, as he believes, without any bad consequences! So long as "nervousness" and a greater or less incapacity for sleeping characterize a large majority of the insane, their own present comfort as well as that of others, whose repose is liable to be disturbed by them, would certainly be promoted by giving them rest. But how much better would it not be to obtain this object by means which will not involve the softening and paralysis of the brain, incident to the continued employment of the former of these two drugs, or that destruction of the forces of organic life which must sooner or later result from the repeated use of the latter.[13] How much better to adapt the proper medicine to each patient, thus enabling the insane to secure a certain amount of sleep under the influence of the remedies best calculated to improve their general condition; instead of gradually, but effectually, destroying all hope of their recovery, by disorganizing with stupefying drugs those most delicate tissues of the nervous system, which are the immediate agents and instruments of the mind.

Esquirol gives a very full account of the necessity and utility of "isolation;" but why he terms that isolation (*isolement*) which consists in removing the patient from his home and friends, only to surround him with strangers, and such strangers, passes comprehension.[14] Never shall I forget the expression of the afflicted father on leaving his son at the asylum; when I offered a word of consolation by reminding him that his son would be comfortable and safe, "and with fools for his companions," he replied. Strict isolation, or solitary life, would of course be as undesirable, as it would be impossible to establish a separate hospital with all its surroundings for each individual patient. But a method which turns the inmates of each ward, like a flock of sheep, into the common hall and sitting-room with nothing to occupy, nothing to interest, and nothing to amuse them, save an occasional walk, during the long hours between breakfast and dinner, and between dinner and supper; a method which condemns these unfortunates to unavoidable idleness, to listless inactivity, to wearisome *ennui*, to the unchecked operation on their minds of their own morbid fancies, and still worse, to the unrelieved and morally contagious association with each other; a method, finally, that accumulates and concentrates upon its subjects all possible degenerating influences, must drive them toward the common goal of dementia with a determination which, however slow in its march, is as irresistible as that which leads the rivers to the dead level of the sea. And yet such a method, in which the principal care taken of the insane seems to be, like that of the police in the street, to keep them from injuring one another, is so common as to have excited no remark, and to be considered as a matter of course![14a] And does not this simple statement of the mode of treatment employed in the dominant school,[15] present ample reason for inquiring if there is not some other mode by which the insane may be more successfully treated; some mode which shall diminish rather than augment the natural tendency of the various forms of insanity to ultimate themselves in dementia; some mode which shall at the same time increase the percentage of cures, and decrease that of the incurables?[16] A critical comparison of the allopathic with the homœopathic system of medicine would show why the former has been attended

with such confessedly poor results in psychical disorders, and why the latter proves so much more successful in those cases, from possessing the only rational principle, and the only sufficient means for their scientific treatment.

The learned Dr. Bennett affirms that, while what he calls *a primitive fact* or *law* gives the greatest accuracy and precision to the sciences which possess it, rendering them worthy to be called exact, medicine in its present state has no such property.[17] He hopes, however, that one day some one will arise whose genius will do for medicine, in discovering its primitive law, what Newton and Lavoisier have done for chemistry and physics, by such discovery raising these branches of knowledge from "groups of phenomena" to the dignity of "exact sciences." In the meantime he declares, consistently enough, that a truly scientific medicine is yet to be created, and concludes that the only way to improve the art of medicine is to advance the study of physiology.

But this author is as unfortunate in his proposed method of establishing the science and improving the art of medicine, as he is mistaken in his assertion that it has no primitive fact or law.[18] For as the most profound knowledge of physiology, of the state of the body in health, fails to reveal its condition in disease; so will the most thorough knowledge of pathology, of the state of the body in sickness or after death, of itself afford no sufficient clue to the remedies which shall heal the one and prevent the other. Indeed, it is well known that of all classes of practitioners, those are the least successful personally who belong to the so-called physiological and pathological schools. While the very desideratum which our author professes to look for, at the same time wilfully ignoring its actual existence, has already been supplied by one whose position among the benefactors of the human race is far above that of the eminent men whom he instances as creators of exact science. The law of the similars, as established by Hahnemann, developed in pathogenesis, supported on the one side by physiology, and on the other by pathology, and finally proved in therapeutics,—this "primitive fact" is "the stone which the builders rejected, and which is become the head of the corner." This last and newest method of pathogenesis, may we

not even enrol it as a distinct science as elaborated by the founder of homœopathy, with physiology and pathology, completes the triangle to be inscribed in the grand circle of therapeutics whose surrounding legend is

Similia Similibus Curantur.

The greatest modern improvement in physiology, and in pathology no less, is that made by Virchow, in developing the now acknowledged fact, that all physiological and all pathological organization, as well vegetable as animal, is necessarily cellular in its origin.[19] The value and importance of this improvement are neither increased nor diminished by regarding, as some more recent investigators are disposed to do, the molecule, and not the cell, as the first and last form of organization. In the deteriorated blood-globules, in the cancer-cells, and in other specific pathological products, we note in their minuter forms the ultimate objective results of morbific influences. Similar alterations might be traced in the nerve-cells, did not transformations so delicate and so imperceptible escape our present means of observation. But still more recondite are the pathological changes that occur in the forces belonging to the spirituous fluid which constitutes the vital economy of the blood; and also in that incomparably finer ether,[20] which, like an electric current, traverses with the speed of thought the voluntary nervous system from its supreme centre to its terminal loops, and *vice versa;* and which, or the counterpart of which, in like manner, pervades the innumerable ganglia and connecting fibres of the involuntary nervous system. Here we cannot fail to note the reciprocal operation upon the mind of these vital but ethereal fluids, and of the blood and nerves to which they belong; and to observe the influence of the mind upon these subtle fluids, and from thence upon the coarser sanguineous currents and nervous tissues which support them. "The animal mind is affected the moment the blood suffers, and reciprocally the blood is affected the moment the animal mind suffers." So convulsions may result from the influence of the disturbed or distressed mind upon the nervous system; while delirium and mania, in all their

various forms and degrees, are constantly seen to follow impressions made by the disordered nervous system upon the mind.

It has been said that a differential cell-pathology corresponding to the present state of histological science, is yet to be developed.[21] And yet it is only after such a pathology has been worked out, that the physicians of the old school could even attempt the construction of the analogous cell-therapeutics by means of which they may hope to advance medicine to an exact state and high rank, in the only way they have deemed possible, through progress in physiology and the allied sciences. Our object in these remarks, is not to "cast reflections," or make invidious comparisons, but simply to show the utter insufficiency of the exclusively objective method by which those who deride homœopathy seek to climb up some other way. From the very nature of the case, that is, from the impossibility of thorough exploration,[22] as well as from other causes, cell-pathology, like cell-pathogenesis, must of necessity be so limited and superficial as to afford little or no ground for the formation of a cell-therapeutics, or, indeed, of any other. Those things which can be subjected to the microscope and the crucible are already cold and dead; while only a living pathology and a vital pathogenesis can guide the physician to a therapia at once rational, practical and truly scientific, by which life may be saved and health restored.

Infinitely more subtle than the material results of morbid processes—which alone the microscope can detect—deranged vital forces start up before the physician clothed only in the sensuous forms of so-called "nervous disease," manifesting themselves only in paroxysms of intense pain, and challenge his utmost skill to reduce them to order. Anon, these deranged vital forces, as violent in action as they are abnormal in character, apparently leaving the physical organization unharmed, develop such mental and moral disorders as may drive their unfortunate subjects from society, or suddenly ultimate themselves in homicide or self-destruction.[23] With the advantage of more delicate means of investigation, cell-physiology, cell-pathology, and cell-pathogenesis may in the near future become possible to a greater extent than now. But a corresponding cell-therapeutics, which

alone could render them practically useful, must forever remain beyond our reach, in mental and moral diseases at least. In cases like those just referred to, where there is fixed derangement of the mental or moral sphere, but no trace of physical disorder, physicians of the old school, looking for the material and objective results that constitute their pathology, find themselves entirely at fault. We know, indeed, that such mental and moral disorders, even when primarily caused by influences purely psychical, are the immediate consequences of physical disease which may or may not have sensibly ultimated itself in some part of the nervous system before being reflected back upon the mental and moral sphere. And in other cases, where such physical disease has originally been perceptible, we know also that, while seemingly giving place to disorders purely psychical, it, in reality, establishes a fixed lesion in the nerve-centre—a lesion too minute for observation, and presenting no other evidence of its existence, but nevertheless remaining as the permanent base of the psychical disorder by which it appears to have been succeeded.

But Nature never leaves herself without a witness, nor does she thus seal up her book of objective and material changes in the inscrutable recesses of the human system, without, at the same time, opening another, which reveals the rise and progress of these pathological changes as expressed in her own chosen language. It is as if the *microscopic negative* of her morbid processes were concealed from our view, while instead we are provided with a *positive*, symptomatic reproduction of the same, enlarged with all the powers of the camera obscura, this latter being at the same time a living, speaking, and even prophetic representation of the disease, far in advance of the structural alterations which indicate only its fully developed and final state. In this open volume of Nature's sufferings we find inscribed not alone the functional derangements which correspond to the disorder actually present, but, in many cases, also certain fixed sensational symptoms which forewarn us of an impending evil.[24]

And here is shown the immense superiority of homœopathy, possessing, as it does, a method by which remedies are made self-adapting to the disease, and that too in psychical as well as in

physical complaints. The minute doses of the homœopathic practice are indeed remarkably suited to disorders of such almost infinitesimal organs as the primordial cells; but they must be selected by some other mode than the practically impossible one of inspecting the morbid changes in the cells themselves. This selection is effected in the new school by means of pathogenesis, in which, as among the sick, we find physical derangements with accompanying mental and moral symptoms; so that the remedy may be chosen to cover the whole case. Nor does pathogenesis fail us when we discover no physical symptoms in connection with the mental and moral affection.[25] Even in predominating physical disorders, some physicians make the greatest use of the mental and moral symptoms laid down in the Materia Medica, selecting the remedies with principal reference to such symptoms of this kind as may be present in their patients. And not only will the mental and moral symptoms furnished by pathogenesis point out the appropriate remedies for disorders purely psychical; but they will at the same time indicate the medicines suitable for the latent physical dyscrasia which may have originally produced these mental and moral affections, and which now, although itself no longer manifest, still effectually maintains them.

The material and objective changes that can be traced in cell-pathology go but little way, and neither reveal the preceding disturbance of the vital forces, nor suffice to build up that corresponding cell-therapeutics to which alone those of the old school can consistently look, and in which would seem to appear their only attempt at a strictly scientific method of healing. Cell-therapeutics, therefore, is the dream of a dream, which leaves its votaries without any sound principle to guide them in healing physical disease, and furnishes them absolutely no assistance in the management of psychical disorders. The method of pathogenesis, on the contrary, supplies a *microcosmic* pathology of the Materia Medica correspondent to the *macrocosmic* pathology of the sick, and by which, under the law of the similars, is developed a therapeutical system that comprehends all physical diseases and equally includes the accompanying mental and moral symptoms; that suffices for predominating psychical disorders with their attendant bodily derangements, and finally reaches

the latent physical dyscrasia, by means of which mania and other forms of insanity are maintained in connection with apparently perfect health of the material frame. As hereditary, this dyscrasia is confessedly beyond the scope of all other than homœopathic medication; while by the latter it may be anticipated, and remedied in the young before it has developed and ultimated itself in mental and moral diseases.

Minute, and especially infinitesimal doses are not necessarily implied in the fundamental principle of homœopathy; but they are essential to its highest practical development. By the most intelligent, and we believe, also by the greater majorty of our school this is now acknowledged to be true as regards chronic diseases of the body. And in order to convince every thoughtful mind in and out of the homœopathic medical profession of the immense superiority of homœopathy, and of this particular mode of applying it in disorders of the mind, we think but little more would be needed than to show the hereditary nature of the most of these disorders, and explain the inseparable connection of them all with corresponding derangements of the voluntary and involuntary nervous systems. Accordingly, the remainder of our present discussion of mental diseases in relation to homœopathy will be indirect rather than direct, and assume the form of a study of these disorders as illustrated by comparison with the state of the body and of the mind in sleep and dreams.

The resemblance between the state of the mind in sleep and that which is termed insanity, is so remarkable that a careful exploration of the former condition cannot fail to throw much light upon the latter. In sleep the senses are steeped in oblivion; the special sensory organs are indeed ready to receive impressions, but the sensorium fails to appreciate them, save in exceptional cases.[26] The rays of light may converge upon the retina, the undulations of the atmosphere may be conducted to the tympanum; perception may be supposed, but there is no sensation. The voluntary nervous system is in perfect repose, and the mind so far as it is dependent upon that, has no communication with the outer world; its action is therefore either entirely spontaneous, or due to impressions received from the organ of general sense and the involuntary nervous system. This latter is less

vigorously active as regards the body; although "the heart beats, the lungs respire, the stomach, the intestines and their accessory organs digest, the skin exhales vapor, and the kidneys secrete urine." But so much more intense is the psychological activity of the organic nervous system, that the soul seems endowed with tenfold energy upon the removal of the controlling influence of the external world and voluntary mind. Such and so great is the difference between the waking and the sleeping state, that, as compared with the former condition, the individual in the latter may be regarded as insane. This supposititious insanity sometimes becomes a terrible reality; cases are recorded in which persons have been awakened from sleep by frightful dreams whose persistent influence drives them to the commission of crimes.[27] De Boismont relates several instances in which such dreams, or, as he terms them, "the hallucinations of nightmare," become the precursors of mania.[28] Leuret has remarked that "there are some deranged persons who reason, during the day, according to the ideas and perceptions of the night; they are very capable of appreciating justly what they see during their waking hours, and provided they do not mingle in their conversation recollections of their dreams, they are perfectly sane."[29] In proof of the coincidence which sometimes exists between dreams and insanity, De Boismont cites the case of a maniac whom Dr. Gregory attended and cured, who had in a week after his recovery, dreams in which he was annoyed with the same hurried thoughts and violent passions which he had during his madness.[30]

The external world is not absolutely excluded in sleep; but the involuntary nervous system, through which alone are received impressions made upon the skin, the general organ of general sense, does not correctly and intelligibly report them to the consciousness. Hence result dreams which, springing from insignificant circumstances, may assume frightful proportions. Such are those in which one dreams of travelling on the summit of a volcano and of walking upon molten lava, from having a hot warming-pan at his feet; of being surprised by robbers, thrown down and having a post driven into the ground between his great and second toes, from having a straw between

those toes; or of being scalped by a party of Indians, from having a blister applied to the head. Among the insane, similar in their nature but much more serious in their consequences, are those illusions of the eye, in which the disordered sensorium converts the image of a friend into that of an enemy; or those illusions of the ear, in which the ordinary reverberations of the air, or other harmless sounds, or even the kindly words of the attendants, are changed into fearful threats and denunciations, from which the sick man tries in vain to escape. As in dreams there is often a semi-consciousness of being in a dream, that partially reassures the mind in the midst of apparent dangers;[31] so many insane persons are conscious of their insanity and of the mischievous and even wicked nature of the acts they commit, but feel entirely unable to restrain themselves from repeating them.[32] And as the dreamer is sometimes awakened by an apparent catastrophe, as of falling over a precipice; so in unsuccessful attempts to commit suicide, the shock of the nervous system, whether from plunging into the water, for example, or from cutting the throat, often serves to restore the madman to his right mind. And when under the sudden and uncontrollable impulse of homicidal mania, persons have destroyed their best friends, the horrid deed seeming to form a crisis of their mental disorder, suffices to bring them back to their senses, and at the same time, overwhelm them with grief for what they had thus unconsciously and involuntarily done.

The just idea of the lapse of time, disappears with the failure of the mind's conscious connection with the body, and feeling of relation to the external world upon which it is founded; so that the events of years seem to transpire in a few moments. On the other hand, the memory is surprisingly active, and the imagination and fancy know no bounds. But reason fails, the judgment is wanting; reflection is impossible; the will is either entirely inoperative, or restricted to futile desire,[33] and the moral sense which should be shocked at the crimes the individual appears to commit or view with complacency, is unconscious or put to sleep with the external senses. The repressing influence of the voluntary will and conscience being removed, dreams represent the subjects which have principally exercised the mind of late, or more

especially, the ruling passions of the soul itself. So that, "however dreams may be fallacious concerning outward events, yet they may be truly significant at home, and thereby we may more sensibly understand ourselves."[34] This failure of the reason, this lack of judgment, this incapacity for reflection, and above all, this total absence of the moral sense, is the very thing which characterizes insanity in one or other of its various forms. The will, on the contrary, is less constant; it may be feeble as in dementia, or furious as in mania. But neither the hallucinations of the insane, the ravings of the maniac, nor the vacillations of the demented, can be admitted to afford any indication of the true character of the individual in his normal state.

The Upsal student who, in 1707, made the essence of the soul consist in thought and that of the body in extension, had the right of the matter in asserting that "the union between them is only the correspondence of the thoughts of the soul with the motions of the body; the soul forming certain thoughts upon the motions made by the body, and the body being influenced to certain motions on occasion of certain thoughts of the soul."[35] And this, which is not inconsistent with the more advanced psychology of later times, is as applicable to our sleeping as to our waking hours. This doctrine accords also with that laid down in a previous paper, of the essential and inseparable connection of body and mind.[36] And exactly the same principle is implied in Lemoiné's definition of dreams: "Un rêve properment dit, reduit à sa simplicité elementaire, à sa puerté parfait, c'est une sensation, c'est une vision, c'est une image exciteé, tout a coup dans l'aime par un mouvement intestine de l'organe et qui s'evanouit avec sa cause organique."[37] Similar is the theory of Spurzheim, that dreams are occasioned by certain organs of the cerebrum remaining awake, while other portions of the brain are in a sleeping condition.[38] Such various modes of explaining the origin of dreams, among which, doubtless, the truth will somewhere be found, are redeemed from the charge of materialism brought against physiologists of the phrenological school, and others still later, only by the implied assumption of the inseparable unity of the soul and body. And the same remark may apply to a similar mode of accounting for the immediate origin

of partial insanity; as if it were due to disorder of some corresponding sphere of that supreme nervous centre, which is at once the mind's external form, its chosen instrument, and its co-operative organ.

The memory and the imagination do, indeed, most prominently display themselves in sleep, and also in some varieties of insanity; and yet it is not in either instance, as distinct parts of the mind thus operating, that they are to be regarded. On the contrary, it is the mind itself, the whole mind, for mind or spirit cannot properly be divided, that acts in dreams, stimulated or excited in these particular directions by corresponding portions of the organism. The same principle holds true in cases of partial insanity; it is not a part of the mind which is insane, but the mind itself is deranged in that particular respect. Of what he terms partial insanity, Maudsley affirms that "the mind is not unsound upon one point, but an unsound mind expresses itself in a particular morbid action."[39] And could we look within and scrutinize the molecular solids and more subtle fluids of the brain, we should, no doubt, there discover some definite physical disease, inseparably connected with, exactly corresponding to, and immediately causative of the special metaphysical derangement, although this same physical disease may have had a purely psychical origin in the first instance. And it is in this latent dyscrasia, where psychical symptoms alone appear, that the homœopathic remedies prove in the highest degree efficacious, remedies selected with particular reference to these symptoms, and pathogenetically corresponding to them, even as these psychical symptoms pathologically correspond to the latent dyscrasia itself.

In this connection more particular mention should be made of morbid dreams, such as have already been referred to as causing crimes or becoming the precursors of insanity. Dreaming of this nature, called Paroniria, is very common, and its origin is thus explained by Hobbes: "And seeing dreams are occasioned by the distemper of some of the inward parts, divers distempers must needs cause different dreams."[40] As the healthy condition of the bodily organs may, under the influence of gentle stimulants from without, give rise to pleasant and delightful dreams, so morbid dreams correspondingly painful may result from dis-

ordered states of the interior organs. But these organs need not be parts of the brain, or even of the involuntary nervous system, for the morbid influence of any diseased structure or tissue of the body may be reflected back upon the "animal soul" in sleep, and thus cause proportionally painful dreams. Hence the possibility of dreams becoming in some instances pathognomonic and even prophetic.[41] Dreams of this kind are, however, usually symbolical in their circumstances, or expressed in figurative language. Thus "frightful dreams are a sign of determination of blood to the head;" they may also announce the onset of intermittent fever, and even of small-pox; "dreams about death often precede apoplexy, which is connected with determination of blood to the head. Dreams about rain and water are often signs of diseased mucous membranes and dropsy. The nightmare (incubus) with great sensitiveness, is a sign of determination of blood to the chest. Dreams of dogs after the bite of a mad dog often precede the appearance of hydrophobia."[42] A gentleman dreamed that a black cat bit him on the side; the next day an anthrax appeared on the part bitten. A patient of Galen's dreamed that one of his limbs was changed to stone; some days after his leg was paralyzed. Many other examples might be adduced, but these, taken mainly from the already quoted works of Winslow and De Boismont, must suffice. In such cases we see how dreams may readily become prophetic if rightly interpreted; *because they at the same time spring from and correspond to certain disordered states of the interior economy of the system.* The unconscious mind seems to make an effort to reveal in the only way it can, that is, symbolically or figuratively, to the conscious mind, the morbid processes already going on in that portion of the internal organization over which it exclusively presides.

Morbid dreams are also produced pathogenetically. The provings contained in our Materia Medica are full of instances of this kind, which often enable us to select the remedy most exactly suited to the sick, by reference to dream symptoms whose intensity and persistence render them most decisive characteristics. And in psychical disorders, dreams may prove equally indispensable in determining the nature of the case, and in pointing out the proper remedy. According to De Boismont, "pathological

dreams have been noticed by all observers, and there is no doubt that they might furnish useful indications. . . . . Sleep with monomaniacs has always been a source of important indications. Esquirol, convinced of this, has often passed the night in listening to them, and more than once his patience has been rewarded by the patient exhibiting in his sleep the cause of his delirium."[43] De Boismont cites some interesting cases in illustration. Salverte relates from Plutarch and Suidas, the manner in which persons consulting the ancient oracles were stupefied with narcotics, such as Belladonna and Stramonium, and made to remember and believe as real those things which they had seen and heard only in dreams thus artificially produced; and how some died soon after, and all others preserved a life-long sadness, in consequence of the noxious drugs thus administered to them.[44] Morbid dreams may also result from purely psychical causes, as the following account of a violent quarrel between an English lady and a supposed witch will show: "Lady Cromwell sent for the old Woman, 'Mother Samuel,' and called her a Witch, and abused her, and pulled off her Kercher, and cut off some of her Hair, and gave it to Mrs. Throgmorton to burn for a Charm. At night this lady (Mrs. C.), as was very likely she would after such an ill day's work, dreamt of Mother Samuel (this 'Old Woman') and a Cat, and fell into Fits; and about a year and a quarter after died."[45]

Some other faculties of the mind, in addition to memory and imagination, are wonderfully exalted in sleep. Galen declared that he owed a great part of what he knew of medicine to revelations made in dreams. Condillac stated that when he had to leave his studies unfinished in order to sleep, more than once they were found to have been brought to a conclusion when he awoke. Condorcet had presented to him in sleep the solution of a difficult calculation, that had puzzled him all the preceding day. "Cardan affirmed that the substance of his book on 'Subtility' was suggested to him in a dream, in which was made clear whatever was dark in all the sciences."[46] The story of Tartini's famous composition, called from its supposed origin *The Devil's Sonata*, will at the same time illustrate the superstitious notions of a former age, and show the exquisite action of

the mind in sleep: "This celebrated composer was sleeping, after having vainly endeavored to finish a sonata; his preoccupation continued during sleep; he dreamed that he renewed his task, and was in despair at composing with so little warmth and spirit, when the devil suddenly appeared, and offered to finish his sonata if he would sell his soul to him. Entirely under the influence of this hallucination, he accepted the proposition, when he heard the devil execute the desired sonata on the violin with an inexpressible charm of execution. He then awoke in a transport of delight, hastened to his desk, and wrote down the music to which he had just listened."[46a] "Franklin related to Cabanis that political combinations, which had often embarrassed him during the day, were frequently made clear to him in dreams." Coleridge composed the remarkable poetical fragment, "Kubla Khan," while in a profound sleep; but being interrupted while writing it down when awake, the greater part of it was irrecoverably lost. Abercrombie relates the case of a gentleman who, having learned Greek in his youth, and afterward entirely forgotten it, in his dreams read Greek books, which he had been accustomed to use at college, and had a vivid impression of fully understanding them.

Prevision of future events has occurred to many people in dreams which were remembered, related to others, and subsequently verified by the event. From the earliest ages as well as in modern times, these dreams have mostly been expressed in symbolical language, requiring to be interpreted. Such were the dreams of the chief butler and chief baker of Pharaoh, and of Pharaoh himself.[47] Speaking of divinely inspired dreams, Dr. Roffman says: "Who is so unacquainted with the sacred writings as not to know that God has revealed most important things in dreams, and for no other cause than that the mind is then more attentive to receive those things which are revealed."[48] Many verified prophecies, given in symbolical language in dreams, were recorded in the Sibylline Leaves and other oracles of the ancients. Jamblicus says: "Thus in the temple of Æsculapius, diseases are healed through divine dreams; and through the order of nocturnal appearance, the medical art is obtained from divine dreams."[49]

Scarcely less wonderful are the dreams in which events actually transpiring at a distance are pictured to the mind. We give a single instance, which may be relied on as perfectly authentic and veritable. "In a midwinter night, Captain Yount, of Napa Valley, California, had a dream in which he saw what appeared to be a company of emigrants, arrested by the snows of the mountains, and perishing rapidly by cold and hunger. He noted the very cast of the scenery; he saw the men cutting off what appeared to be tree tops, rising out of the deep gulfs of snow; he distinguished the very features of the persons, and the look of their particular distress. He woke profoundly impressed with the distinctness and apparent reality of his dream. At length he fell asleep, and dreamed exactly the same dream again. In the morning he could not expel it from his mind." The result was that he dispatched a company of men with mules, blankets, and provisions, one hundred and fifty miles distance, into the mountains, to a place that had been recognized by a comrade from the description given in the dream, and there they found the emigrants in exactly the condition of the dream, and brought in the remnant alive.[50] Dr. Delitzsch says: "Not only many poetical and musical inventions, but many scientific solutions and spiritual perceptions have been conceived and born from the life of genius awakened in sleep;" and he quotes Lavater as confessing "that there is in human nature a sensorium for invisible, absent, remote, future, contingent things, for real images and sensuous symbols of such things;" and adds a couplet from Æschylus:

> "For in sleep the spirit is clear-sighted;
> By day the spirit's vision of the future is limited."[51]

The most of these cases are what Dr. Hammond would term instances of "*unconscious cerebration.*" A similar condition of the mind was doubtless referred to by Sir Thomas Brown when he said: "Sleep is the waking of the soul; the ligation of the senses, but the liberty of reason." Of the same mental condition Maudsley says: "The *preconscious action* of the mind, as certain metaphysical psychologists in Germany have called it, and the *unconscious action* of the mind, which is now established beyond

all rational doubt, are assuredly facts of which the most ardent psychologist must admit that self-consciousness can give no account. When the individual brain is a well-constituted one, and has been duly cultivated, the results of its latent activity, starting into consciousness suddenly, sometimes appear like intuitions; they are strange and startling, like the products of a dream ofttimes are, to the mind which has actually produced them."[52] So writes one of the ablest authors of the present day, and the phenomena to which he alludes should be carefully taken into the account in every estimate of apparently disordered conditions of the mind. For such seeming anomalies may greatly resemble certain mental conditions of those who are actually insane. As comparatively few dreams are remembered, so much of the unconscious action of the mind necessarily escapes observation. In any case we see the results only, not the processes by which they are reached; but for this very reason these results are all the more remarkable and difficult to be explained in accordance with commonly received opinions.

The insane mind also will sometimes give proof of unusual power in certain directions. The cunning and ingenuity often displayed by crazy people are almost incredible, while the fearful *will-power* put forth by maniacs is well illustrated by the tenfold physical force which it inspires. But the examples of the powerful operation of the disturbed or unsound mind most interesting to us as physicians, are those which show its production of bodily disease. Among the ancients this destructive influence of morbid mental and moral action was well understood. Seneca, quoting Epicurus, says: "*Immodica ira quiquit insaniam;* immoderate anger becomes madness." And addressing his friend Lucilius, he adds: "Thus it is that the event of an extraordinary passion is madness, and therefore anger is to be avoided, not only for moderation sake, but for the health both of the mind and body."[53] Cicero says: "And when this heat and disturbance of the mind is of any standing, and has taken up its residence, as it were, in the veins and marrow, then commence diseases and sickness."[54] Boethius exclaims:

"Cela num tandem valuit protestas
Vertere insani rabiem Neronis?"

"What heavenly power is able to change the madness of furious Nero?"[55] Grotius affirms that:

> "Sæpe dolor tenuis morbos produxit accerbos,
> Tollere quos nullis sit medicaminibus."

"A light grief often produces diseases so severe that no medicine can remove them." According to Baglivi, the passions of the mind are ordinarily the causes of distempers of the body, to which physicians ought to have a special regard; and for this reason he thinks they should be at the same time confessors to their patients. A similar opinion was held by M. Aiqnuan, physician to the king of France in 1705, who states that "the idea and fear of small-pox sometimes occasions that distemper." And in later times we know that the intense apprehension of cholera has sufficed to develop this disease in many persons, where others equally exposed, but less fearful, have escaped. Dr. Rush mentions the case of a soldier who kneeled down to be shot; upon being pardoned, he was unable to rise from a sudden attack of tetanus caused by fear.

The most remarkable instances of mental power in the insane, however, as in dreams, are those which simulate the intuitive perceptions of the unconscious mind. And the most wonderful exhibitions, alike of the unconscious and the unsound mind, are those which may be included under the term *prevision*. A French author, quoted by De Boismont, says: "It is interesting to listen to the occasional sayings and soliloquies of patients on the approach of an attack of apoplexy. All their senses seem healthy and perfect, and they appear to have acquired the power of prophecy. The first object of their thoughts is the fact that they are about to leave the world; they then announce the future by the present, and the event justifying their predictions, they are looked upon as real prophets. I had one who predicted his death six days before it took place." Xenophon makes Cyrus declare, in his last moments, "that the soul of man, at the hour of death, appears *most divine*, and then foresees something of future events." Aretæus, speaking of insane persons who evince this astonishing faculty of prevision, says: "Their senses are exalted; their minds possess great subtlety and extraordinary power of penetrating

into futurity. At first they commence by presaging their own death; they then predict the future of persons who may be present; and then their spirits are released from the coarse covering of clay. The event (*i. e.*, the fulfilment of the predictions) fills all who behold it with admiration."[56] Charron testifies to the same effect: "Melancholy, maniacal, and phrenetic persons, and those affected with certain diseases which Hippocrates calls sacred (*morbus sacer*), speak Latin without having previously learned it, compose verses, converse sensibly, *discover hidden things*, and *predict future events*, although they were previously idiots and rustics, and again became so after their cure."[57] Jamblicus calls such persons *Divinitus afflati*, "who, unconscious of their own acts, have neither a human nor an animal life, but one far more divine, by which they are inspired and possessed and made cognizant of the future."[58] Cases of this kind properly belong, however, to the somnambulistic condition, a condition which is as far removed from natural sleep on the one side, as it is from the ordinary state of some persons on the other. This condition, described by Hartman as a "diseased state in which patients believe they can foretell future events,"[59] as well as that called ecstasy and trance, possess for psychologists and physicians alike the highest interest and importance; but our necessary limits will permit only this passing reference to them now.

As in physical disease, so in morbid dreams, and in the various forms of insanity, there may be depression, as well as exaltation of particular functions and faculties. In the last two of these three classes of deranged vital action, this depression, for its immediate and sustaining source and cause, must be referred to a similar depression in the corresponding sphere of the physical organism; even as the mental exaltation, which has just been considered, must be referred to a similar excitement of the physical sphere for its origin and maintenance.[59a] Impairment of the memory, for example, is well known to be caused by such debility of the corresponding portion of the supreme nervous centre as results from improper or excessive sexual indulgence, from the habitual use of tobacco, and from the abuse of various other drugs. In its earlier stages this particular mental weakness appears simply as a want of power of recollection, or of recalling

at will impressions previously made upon the mind. In its later and more advanced stages the loss of memory may be absolute and total, and correspond to an actual paralysis or structural disorganization of the special organs upon which this faculty depends. In the former case the removal of the maintaining cause, and exhibition of remedies homœopathic to the morbid condition it has produced, will usually be followed by a more or less complete restoration of the original power of memory. In the latter case so favorable a result can no longer be expected, since there must be a permanent loss of function exactly correspondent to the structural disorganization or final obliteration of its special organ. And this, which is so readily seen to be true of one mental faculty—the very one whose intimate connection with the physical system is most obvious—is equally true of each of the others and of them all.

In its earlier stages, therefore, almost every variety of mania and insanity, however violent or complete, may be, and often is, cured by medicines homœopathic to each individual case. But when the mental derangement has reached the ultimate stage of dementia the prognosis is far otherwise. In its inception mental disease may assume the form of grave depression, or of furious exaltation,—from corresponding physical affections; the former condition being equally with the latter amenable to the proper medicines. In its ulterior development there may be that listless vacuity of the demented, which, even in persons whose bodily health is unexceptionable, not only proclaims that their "mind is gone," but also that there is gone with it that finer organization of the brain which made this structure the immediate instrument and express image of the mind. In other and, if possible, still more melancholy instances of far-advanced dementia, the internal paralysis of the mental organs is accompanied by an external palsy of the apparatus of locomotion and speech, and by that dulness of the senses which recalls the Scriptural account of those who "having eyes see not, and having ears hear not."

Our last point of comparison between the state of the mind in dreams and that of insanity, and the most characteristic of all, is found in that entire want of the sense of right and wrong

which usually pervades the former and remarkably distinguishes some varieties of the latter. To this absence of the moral sense in dreams reference has already been made; when the mind is in the presence of some great danger—a constant occurrence in morbid dreams—the self-love and natural desire of self-preservation instinctively assert themselves. But language and conduct that would shock the waking mind to hear and witness, in dreams pass unrebuked, if not actually participated in, and without even a momentary consciousness of the vileness of the one or enormity of the other. In like manner there are cases of so-called moral insanity, in which all the intellectual faculties seem unimpaired, while the moral sense is totally wanting. It is difficult in many instances, particularly in the young, to discriminate between the wilful wickedness of the depraved and the irresponsible, but perverse, and often malicious actions of the morally insane.[60] So far as belief is concerned, the wish is often father to the thought; and the celebrated Jeremy Bentham has well expressed the facility with which the mind may render itself incapable of receiving unwelcome truth. "Thus it is," he says, "that in all that train of reasoning which exercises itself over the particular field in question—in all that quarter of the psychological frame—a sort of local palsy establishes itself; a habit of imbecility, a distempered relish for the convenient absurdity, a nausea for the inconvenient truth. This partial sort of mental palsy is not incompatible with an ordinary nor even an extraordinary degree of strength in the other part of the mental frame." But our present concern is with conduct rather than belief; and the first indication that a morally insane person gives of his disorder may be seen in some violation of social propriety, in the failure of the ordinary domestic affections, or in personal self-neglect. According to Maudsley, Dr. Prichard was the first to call attention to this form of mental derangement, which is now far from being uncommon, and which, in its full development, is characterized by complete unconsciousness of the distinction between right and wrong in any respect; by a shameless disregard for all the conventionalities and even decencies of life, and by constant and persevering efforts for the grossest gratification of self, and the most ingeni-

ous and malicious attempts to injure others. But this apparently hopeless form of psychical depravity has in many instances been perfectly cured by medicines selected in accordance with indications furnished by pathogenesis, and recorded in the homœopathic Materia Medica.

Starting with the acknowledged fact of the connection of mental with bodily disease, we have shown how the allopathic practitioners are often successful in treating mental diseases dependent upon bodily disorders, which, like fevers and suppressions, are amenable to the remedies they employ; while in all that large class of mental and moral disorders resulting from hereditary, epileptic, or other obstinate bodily affections, as well as in those which occur in otherwise healthy conditions of the material frame, they are not only entirely at fault, but the indiscriminate, palliative, and repressive means they make use of suffice to fill our lunatic asylums with permanent incurables.

The allopaths admit that they have no fundamental principle or "primitive law," by which medicine may be rendered an exact science; but we have sought to show that homœopathy possesses such a principle in the law of the similars, which enables its practitioners to treat successfully physical diseases with their attendant mental and moral affections; to rectify mental and moral derangements with their accompanying bodily disorders; to cure diseases purely psychical, *i. e.*, those with no apparent physical symptoms; and even to reach and remove those latent dyscrasiæ which, in reality, support these psychical disorders where the organic health appears perfect. This great theme we have endeavored still further to illustrate by comparing the various states of the body and mind in sleep and dreams, with those of the different classes of insanity; showing how all these several mental and moral conditions are necessarily associated with corresponding physical alterations, and avoiding the charge of materialism, to which we were liable in common with some of the authors quoted—from speaking of these mental and moral states merely as functions of the physical organization—by reference to that principle of *the inseparable union of body and mind* which it was the object of our last year's report to prove. And as in a previous report on electro-magnetism, we attempted to

establish homœopathy in its appropriate place in the great circle of the sciences, by showing that all the action, pathological, pathogenetic, and therapeutic, of this universal force was strictly homœopathic, so now we have sought to show how homœopathy, from its natural and accurate self-adaptation to all bodily, mental, and moral diseases has, indeed, raised medicine to the desired rank of an *exact science*, and how, both in healing sickness of the body and in "ministering to a mind diseased," it is at the same time the most useful of all the arts that promote the welfare of mankind.

NOTES AND REFERENCES.

(1) Annals of Insanity; comprising a large Selection of Curious and Interesting Cases (108) in the Different Species of Insanity, Lunacy, or Madness, with the Mental and Moral Treatment of each. By William Perfect, M.D., London, 1805, pp. 13, 37, 59.

Haslam says: "Where the patient is strong, and of a plethoric habit, and where the disorder has not been of any long continuance, bleeding has been found of considerable advantage. The melancholy cases have been equally relieved with the maniacal, by this mode of treatment."—*Observations on Madness and Melancholy, by John Haslam*, London, 1809, p. 313.

Dr. Forbes Winslow relates several instances, in which the profuse bleeding of insane persons who had attempted suicide by cutting their throats, has been followed by the restoration of their senses.—*Anatomy of Suicide*, London, 1840, pp. 235–240.

(2) *William Perfect* (*Annals*, pp. 339–342) reports a similar recovery of the mental faculties in persons who, intending self-destruction, have thrown themselves into the water.

Gerrard Borstius, who published, at Amsterdam, in 1704, *A Practical Description of Diseases of the Brain*, in Latin, says of hydrophobia, that "salt water is the greatest help; but many people are cured by being thrown headlong into a river or some running brook."

Celsus says: "There is but one only remedy against madness, that is, to throw the patient all of a sudden and unawares into a pond; and in case he cannot swim, to take him up and dip him again, till at last he overcomes his fear of water."—Lib. v, cap. xxvii, p. 199.

An English physician relates, that "at the siege of Havana, in 1756, several men, ill of fevers, jumped into the sea from on

board ship, during the delirium which attended the paroxysms of the disease; some were drowned, but the most part of those who were recovered from the waves appeared to be greatly benefited by the ducking."—*A Treatise on the Fevers of Jamaica, by Robert Jackson, M.D.*, Philadelphia, 1795. Notes to chap. iii, p. 10.

(3) *Dr. Erhardt* reports a case of furious "acute transitory mania," caused by intermittent fever.—*Quarterly Journ. of Psychol. Med.*, vol. ii, p. 612.

Greisinger relates a case of intermittent delirium (tertian) in a young man in an aguish district; the attacks began with an indescribable feeling of pain in the region of the heart and with strong pulsations of the heart; the patient, recovering from the delirium after a deep sleep, cured by Quinine. Also a case of quartan intermittent insanity in a man in an aguish district who had never had ague; cured by Quinine.—*Cited by Maudsley, Phys. and Path. of the Mind*, p. 233, n.

(4) *Annals of Insanity*, pp. 21, 185, 346: "The aloes appears to have been successfully used to restore the hæmorrhoidal flow. Dr. Perfect also mentions some cases of insanity in which the natural cessation of the menses at the change of life was followed by a return of sanity."

(5) *Medicinal Histories and Reflections*, by John Ferriar, M.D., Senior Physician to the Manchester Infirmary, Dispensary, Lunatic Hospital, and Asylum. Philadelphia, 1816; first American edition; p. 180.

(6) *Observations on Madness*, p. 328.

(7) I have seen a young man of eighteen years, upon recovering, under homœopathic treatment, from typhoid fever, fall into so desperate a state of moral insanity, that his own mother became afraid to remain in the house with him at night, from fear of being murdered, or of having the house burned over her head, both which he repeatedly threatened.

Dr. Fr. Hoffmann mentions insanity of every species as frequently occurring after fevers, especially if protracted to a great length.

Dr. Benjamin Rush quotes the case of "a clergyman of the most exemplary moral character, who spent the last moments of a fever, which deprived him both of his reason and of his life, in profane cursing and swearing;" and adds, "I once attended a young woman in a nervous fever, who discovered after her recovery a loss of her former habit of veracity."—*Medical Inquiries and Observations*, 3d ed., Phila., 1809, p. 181.

Dr. Hermann Weber reported several cases of delirium or acute insanity during the decline of acute diseases, especially the

delirium of collapse, which he treated successfully by the free use of opiates, as much as a third of a grain of Morphia being given regularly every two hours until sleep was produced.—*Medico-Chirurg. Transactions*, July, 1865, vol. xxv, 2d series.

M. Michea reports the results of using Opium in seventeen cases of insanity; eleven were cured and three ameliorated. He began with one-grain doses of the gummy extract of Opium, or one-fifth of a grain of Morphia, given once a day; and increased by the same quantity daily, occasionally suspending the administration for a few days. The mean period of six to eight weeks elapsed after treatment was commenced. Eight men out of nine were cured, but only three women out of eight. The mean quantity required for the cure was 113 grains of the extract, or 15½ grains of the Morphia.

In ten other cases M. Michea employed *Hyoscyamus;* of eight men, four were cured; two women, both cured. He gave from 10 to 14 grains daily, the entire quantity for each varying from 190 to 250 grains.—*Gazette Medicale*, 1853.

(8) "Sketches in Bedlam, or Characteristic Traits of Insanity as displayed in the Cases of One Hundred and Forty Patients of both sexes, now or recently confined in New Bethlem. To the above are added a Succinct History of the Establishment, its Rules, Regulations, Forms of Admission, Treatment of Patients, etc. London, 1823." This volume, inscribed by no author's name, but evidently compiled by one of the officers of the Asylum, is filled with illustrations of the statement of the text.

In treating of medication in the Massachusetts asylums, the Board of Charities of that State speak freely of "the guilt of wasting human treasure and poisoning human blood by the use of noxious drugs," in the case of the helpless insane, as chargeable wholly upon those who prescribe them.

(9) A French writer, quoted by Dr. Rush, in his prediction of events that are to happen in the year 4000, says: "That mankind in that era shall be so far improved by religion and government that the sick and the dying shall no longer be thrown together with the dead into splendid houses, but shall be relieved and protected in connection with their families and society."

In his "Observations on the Diseases which Occurred in the Military Hospitals of the United States during the War of the Revolution," *Dr. Rush* says: "In fevers and dysenteries, those soldiers recovered more certainly and more speedily who lay at the greatest distance from the walls of the hospitals." And he quotes the following testimony to the same effect from an English surgeon: "It is proved, in innumerable instances, that sick men recover health sooner and better in sheds, huts, and barns

exposed occasionally to wind, and sometimes to rain, than in the most superb hospitals of Europe."—*Jackson's Remarks on the Constitution of the Med. Department of the Brit. Army*, p. 340.

(10) *Sir William Elliss*, of Hanwell Asylum, England, says: "It is a melancholy fact that, on a most careful personal examination of each of the 588 cases now in the house, there do not appear more than fifty which, under the most favorable point of view, can be considered curable."—*Quoted by Forbes Winslow, Observed Diseases of the Brain and Mind*, Second American from the third English edition. Philadelphia, 1866, p. 28.

(11) "Nihil sane in artem medicinam pestiferam majis unquam irrepsit malum, quam generalia quædam nomina morbis imponere iisque optare Velle generalum quondam Medicinam." These words of the famous English physician Huxham *Hahnemann* quotes approvingly. For his own general doctrine, as above cited, see the *Organon, passim.*

(12) Far more injurious are the subcutaneous injections of Morphine for the insane. Even the advocates of this method are compelled to apologize for "the mishaps experienced in its administration" in some cases, and "the different classes of unfavorable phenomena" which follow it in others.—*Quart. Jour. Psychol. Med.*, vol. v, p. 592.

Maudsley calls "the subcutaneous injection of Morphia a valuable expedient," but is forced to admit "that successive injections of Morphia, though followed by brief snatches of fitful sleep, have been followed also by fatal collapse or coma."—*Phys. and Path. of the Mind*, pt. ii, chap. vii, p. 439.

(13) *Dr. S. Newington*, experimenting on himself, discovered that from cloths steeped in mustard-water, applied to the legs and lower part of the abdomen, and kept on long enough to occasion a redness of the skin, he experienced the most soothing effects, and gradually passed into a dreamy semi-conscious state, which lasted during the half hour the application was continued, and was followed by a lively and joyous feeling, the liveliness lasting the whole day. The same mode of treatment was employed in numerous cases of insanity, especially in the earlier stages, and where, in spite of repeated doses of Morphia, sleep had been wanting for several nights; the results were most gratifying, the pulse being reduced, cerebral congestion and nervous excitement relieved, sleep secured, the violence of acute maniacal attacks abated, and in some cases a complete cure seems to have followed this simple method. In cases of violent mania the greatest relief was produced by an ordinary warm bath, into which five or six handfuls of crude mustard were thrown, and

which was used for half an hour at a time every twelve hours; so that the skin was kept in a constant state of redness.—*London Lancet*, June 10th, 1865.

(14) "L'isolement des aliénés (sequestration, confinement) consiste à soustraire l'aliéné à toutes ses habitudes, en l'eloignant des lieux qu'ill habité, en le separant de sa famille, de ses amis, de ses serviteurs; en l'entourant d'etrangers; enchangeant toute manière de vivre."—*Esquirol, Des Maladies Mentales*, Tome Second. Paris, 1838, p. 313.

(14a) "It is probably too generally true that public asylums are more places of custody than true hospitals for the sick."—*John P. Gray, M.D.*, Supt. New York State Asylum.

(15) Although far from being partial to this form of expression, we deem it perfectly appropriate here; for the allopaths have and mean to retain control of all our public institutions for the insane. Nor indeed can much change for the better be hoped for in this respect, until by the manifestly greater success of similar establishments, built up, sustained, and administered by homœopaths, the public shall be convinced of the immense superiority of this method over the other.

(16) *Dr. J. Thurnam, On the Statistics of Insanity*, says that, "of ten insane persons, five die insane sooner or later; five recover; but two of these remaining well the rest of their lives, the other three having subsequent attacks, during which at least two of them die."—*Quoted by Maudsley, Phys. and Path. of the Mind*, p. 421.

(17) *The Principles and Practice of Medicine, by John Hughes Bennett, M.D., F.R.S.* Edinburgh, 1869.

(18) Had Dr. Bennett but studied the logical treatises of the founder of the Peripatetic school of philosophy, to whom has commonly been ascribed the oft-repeated words, "Amicus Plato, amicus Socrates, magis tomen, amica veritas," he would at the same time have enlarged the sphere of his observations, and rendered more catholic his conclusions. "We shall possess this method perfectly," says the philosopher, "when we are similarly disposed, as in rhetoric, *medicine*, and such like powers, and this is to effect what we choose from possibilities; since neither will the rhetorician persuade *from every mode, nor the physician heal; but if a man omits no possibility, we say that he sufficiently possesses science.*"—*Aristotle, Organon*, "Topics," bk. i, cap. iii.

(19) *Cellular Pathology, as Based upon Physiological and Pathological Histology. By Rudolph Virchow.* New York, 1868.

Before the present science of histology was so much as named, and long before the development of the molecular or cell theory in physiology, *Swedenborg* taught its essential principles, but

without the technical phraseology.—*Economy of the Animal Kingdom*, vol. ii, p. 7, chap. viii.

This *ultima thule* in modern organical science exactly corresponds to the final doctrine of the ancients in physical science. According to *Democritus*, "the principles of all things are atoms and vacuum." So, according to *Th. Wirgman*,—*Principes de la Philosophie Kantesieund ou Transcendentale*, London, 1824,—"Toute chose dans Natura se compose de matière, et une forme." Cicero, who in one place calls Democritus the inventor and author of this doctrine of atoms, in another place ascribes it to Leucippus, stating that Democritus followed him in this, but was far more full in the rest.

Posidonius, the Stoic, however, attributes the doctrine of atoms to Moschus, who, according to Strabo, lived before the Trojan war. "Si vero Posidonio credendum est, antequum de atomos dogma Moschi est, hominis Sidonii, qui ante Trojani belli tempus vixit."—*Strabo*, lib. xvi.

"Democritus et Epicurus atomos principio dixerunt: nisi hæc opinio ponenda sit antiquior, et, ut Stoicus dicebat Posidonius, deducta a Moscho quodam Phœnicc."—*Sextus Empiricus, Adv. Phys.*, lib. i.

Jamblicus calls Moschus, "*Naturæ Interpres.*"—*De Vita Pythagoræ*. Amstelodami, 1707, cap. iii.

Anaxagoras held that "the principles of all things were indued with *similitude of parts;* that as the dust and filings of gold might be embodied into a mass, so was the universe composed of *little bodies consisting of similar particles.*"—*Diogenes Laertius, Lives of Ancient Philosophers*, London, 1688, p. 101.

(20) "In what manner the soul, confined by the chains of the body, may be disturbed in its actions, has not hitherto been satisfactorily ascertained, but is still a moot point in philosophy. In my opinion, it appears very probable that the intellect, originally pure, luminous, and inorganic, infused by the Almighty into a living body at its first creation, has a connection and commerce with a very subtle ethereal fluid (*cum subtilissimo æthero fluido*), and that the purer this fluid is, the functions of the mind are performed with so much the more alacrity; whilst, on the contrary, the more impure it is, and the more it is imbued with sulphurous, vaporous, and terrestrial particles, men are found to be more dull and stupid."—*Fr. Hoffmann, M.D., De Opt. Philos. Ratione.*

(21) "The cancer-cell, the pus-cell, and all other disease-produced cells, have their patterns in the cells of healthy structure. The cells of tubercle correspond with the corpuscles of the lymphatic glands; pus and colorless blood-corpuscles cannot be dis-

tinguished except by looking at the place whence they came."—*H. Maudsley, M.D., Body and Mind.* New York, 1871, p. 151.

(22) "The path of knowledge of experimental physical investigation advances from without inward, and has there before it a limit beyond which it cannot now or ever pass."—*Dr. F. Delitzsch, Psychology.* Edinburgh, 1869, p. 21.

"Le scalpel, le microscope, les reactifs pourront-ils nous montrer jamais le mécanisme des operations d'esprit? . . . Jusqu'a lors l'etude des formes et des manifestations nous a seule été permise. Il est probable que l'essence des choses, la cause première, nous echappera toujours."—*Dictionnaire du Med. Practicien.*

(23) "In some convulsive diseases a delirium or insanity supervenes and the convulsions cease; and, conversely, the convulsions shall supervene and the insanity cease."—*Dr. Darwin, Zoönomia,* cited by *Maudsley, Phys. and Path. of the Mind,* p. 244.

(24) Fixed pain, extending through the chest to the back between the scapulæ, and continuing for some time, indicates the formation of pulmonary tubercle, and yet so far in advance that this otherwise fatal disease may be averted by the timely exhibition of the proper remedies. I have found the Kali jodidum efficient in many cases of this kind.

(25) "Some diseases consist only in morbid actions, but do not produce any change in the structure of parts."—*Morbid Anatomy of the Human Body, by M. Baillie, M.D., F.R.S.;* 2d Am. ed. Walpole, N. H., 1808; preface.

(26) Numerous instances might be cited in illustration of the power of habit and desire to produce a remarkable acuteness of particular sense-organs; the sleeping soldier starts at the first tap of the drum, and the fireman springs from his bed with the first peal of the bell. Nor are examples of the opposite kind wanting, of persons unable to sleep without the accustomed habitual sounds. A miller being very ill, his mill was stopped that he might not be disturbed by its noise; but it was impossible for him to sleep till it was set going again. The manager of some vast iron works, who slept close to them amid the incessant din of hammers, forges, and furnaces, would at once awake if there was any cessation of the noise during the night.—*Vide Macnish, Philosophy of Sleep.*

(27) *Dr. Forbes Winslow, On Obscure Diseases of the Brain and Disorders of the Mind,* pp. 71, 394–981, relates several cases in which dreams have resulted in crimes.

A. B. De Boismont, History of Dreams, Visions, Apparitions, Ecstasy, Magnetism, and Somnambulism, Philada., 1855, chapter vi, gives similar instances.

(28) *History of Dreams, Visions*, etc., pp. 185–209, *Dr. John C. Bucknell*, says: "I have known several instances in which patients becoming convalescent from attacks of acute mania, have distinctly and positively referred to frightful dreams as the cause of their malady." The morbid influences which really produce the insanity are thus seen to develop their first action in dreams, whose intensity and violence may as greatly tend to promote the insanity itself, as complete insomnia would.

Dreams may also cause fatal accidents. A mother dreamt that a mad bull was attacking her, and instinctively squeezed up her child to protect it, but on awaking she found the infant cold and dead.—*London Morning Herald*, November 23d, 1854.

(29) *Fragmens Psychologiques*, cited by De Boismont.

(30) *History of Dreams*, p. 209.

(31) "Comme dans le rêve, ceux qu'ont des hallucinations ont quelquefois la conscience qu'ils sont dans délire, sans pouvoir en degager leur esprit."—*Des Maladies Mentales considérées sous les Rapports Medical, Hygienique et Medico-Legal, par E. Esquirol.* Paris, 1838, tome i, p. 96.

(32) Si possem, sanior essem: Sed trahit invitam nova vis: aliudque Cupido, Mens aliud suadet: video meliora, proboque: Deteriora sequor.—*Ovid*, Metam. i, 7.

"*If it were possible* I would that I were well. But I am distracted by a strange force; desire leads me in one direction, reason in another. I see and approve the better way, but still pursue the worse." The poet's pathetic expression of man's too often ineffectual contest with the evil within himself, still more forcibly applies to the vain struggle of the conscious mind with the *overruling insane impulse.*

(33) There are few who have ever suffered from painful dreams but can recall the intense agony that is concentrated in the double consciousness of impending danger, and of absolute inability to escape from it.

(34) Sir Thomas Brown, quoted by Dr. Madden, in an able article on "Dreaming considered especially in Relation to Insanity," reprinted from the *British Medical Press and Circular*, in *Quart. Jour. Psychol. Med.*, vol. i, from which we have made several quotations.

According to *Zeno*, "Any one may give a good guess of his own proficiency from the observation of his dreams, thus: If, when asleep, he fancied nothing that was immodest, nor seemed to consent to any wicked actions or dishonest intentions, but found his fancy and the passions of his mind undisturbed, in constant calm, as it were, always serene and enlightened with the beams of divine reason."

(35) *Dissertatio Philosophica*, etc., Upsal, 1707.

Spinoza went back a step further, and assumed that the entire universe, moral and physical, consisted of one substance (unica substantia), with two modes, thought and extension.

(36) "Vital Dynamics," *Trans. of Am. Inst. of Hom.*, 1873.

"Anima humana inferiores omnes vita sua continet. Humana mens spiritus est, perquem corpus, cui est connexus, vivit, aptus cognitioni Dei."—*Vives, De Anima et Vita*, 1538.

"We do not forget that *the corporeal*, or merely vital, *is an essential element of man's existence, and cannot be disjointed from the soul* when considered in a sphere of actual living agency."—*J. H. Green, F.R.S., D.C.L., Spiritual Philosophy*, vol. i, p. 289. London, 1865.

Dr. Green, who died December, 1863, aged 72, was for many years associated with Sir Astley Cooper as joint lecturer on Anatomy and Surgery in St. Thomas's Hospital; also Professor of Anatomy to the Royal College of Surgeons, and Professor of Surgery of King's College, London. Becoming, in 1834, the literary legatee of his intimate friend, Coleridge, he devoted, "so far as was necessary, the whole remaining strength and earnestness of his life to the one task of systematizing, developing, and establishing the doctrines of the Coleridgian philosophy." And if he failed to build an intelligible and harmonious system of philosophy upon the irregular foundation, and with the fragmentary materials furnished, it must be remembered that this was a task which no other man could have undertaken.

Lord Bolingbroke says: "To talk of our abstracting ourselves from matter, and being resolved, as it were, into pure intellect, is proud, metaphysical, unmeaning jargon."

(37) *Du Sommeil au Point de Vue Physiologique et Psychologique.* Paris, 1855.—*Cited by Dr. T. M. Madden.*

(38) "Dreams furnish a particularly fruitful field for the study of the specific effects of organs on mind, because these effects are more distinctly felt and more distinctly declared when the impressions from the external senses are shut out in sleep."—*Body and Mind, by H. Maudsley, M.D.*, New York, 1871, p. 37.

"Si regarde comme tres problematiques les indications anatomiques que Gall a fournies, sur les compartments cerebraux, j'admets néaumoins avec une profonde conviction l'existence de certaines zones fonctionelles dans la masse encephalique."—*Guislain.*

(39) *Physiology and Pathology of the Mind*, New York, 1867, by H. Maudsley, M.D., p. 326.

(40) *Leviathan*, part i, c. 2, cited by Dr. Madden.

It is doubtless those insane by day and afflicted by morbid

dreams by night, that Plato says, in the *Tenth Book of Laws*, towards the close are "startled, when awake, by apparitions, and in sleep by dreams."

(41) "Persons who have been attacked by epilepsy, paralysis, and apoplexy, have had, for some period previous to their seizures, distinct recollection of dreaming of these affections; in fact, they appear to have had a clear presentiment of their particular disease, as well as a prophetic inspiration of their mode of death."—*Dr. Forbes Winslow, Obscure Diseases*, etc., p. 395.

(42) Baron Feuchtersleben, *Principles of Medical Psychology*, cited by Dr. Madden.

(43) *History of Dreams*, etc., pp. 204–209.

(44) "Ceux qui avoient une fois consulté l'oracle conservaient, dit-on (Suidas) une tristesse qui durait toute leur vie; effet naturel de l'alteration grave de leur Santé par les bienvages qu'on leur avait administres."—*Les Sciences Occultes, par M. E. Salverte*, Paris, 1829, p. 269. We quote from the second (posthumous) edition. The learned author died October 27th, 1839, in his sixty-eighth year.

(45) *An Historical Essay concerning Witchcraft, by Francis Hutchinson, D.D.*, Chaplain in Ordinary to His Majesty, etc. Second ed., London, 1720, p. 132.

(46) *The Life of Girolamo Cardan*, of Milan, Physician. By *Henry Morley*, London, 1854; vol. ii, p. 57.—A very curious and interesting biography of a celebrated and profoundly learned Italian physician and professor.

(46a) De Boismont, *History of Dreams*, p. 202.

(47) Genesis 40, 41; compare Job 30: 15–18.

(48) Et quis in sacris litteris tam hospes est qui nesciat, Deum in insomniis maxima revelâsso: non aliam causam quam quia mens tunc sit attentior ad eo capienda, quæ revelantur.—*Dr. Fr. Hoffmann.*

(49) *Jamblichi Chaleidensis*, ex Cole-Syria, DE MYSTERIIS LIBER. (Græco et Latine.) Thomas Gale. Oxonii, 1678; sect. iii, chaps. 3 and 4, pp. 62 and 64.—This is a rare and curious work, seldom to be found outside the great libraries; and we marked that as a white day on which we secured the fine old folio copy from which we quote.

Jamblicus also says that the soul has a twofold life (anima duplicam habet vitam), the one along with the body, the other separable from everything corporeal; that when awake we chiefly make use of the life that is common to the body, but in sleeping the soul may be entirely released from its chains and make use of the incorporeal life; in this state, among other phenomena, he recognizes that of prevision. "Inimo quoties Diis copulan-

tur per abstractum hujusmodi operationem, haurit certè verissimas ab iis et exuberantissimus notiones, à quibus elicit veram in somniis divinis vaticinationem." Sec. iii, c. 3, p. 62.

(50) *Nature and the Supernatural, by Horace Bushnell.* New Edition, New York, 1868, p. 475.—This account was personally communicated to Dr. Bushnell, in California, six years after the occurrence, by Capt. Yount himself; and was well and publicly known to be true. A gentleman present at the time said: "You need have no doubt of this; for we Californians know the facts and the names of the families brought in, who now look upon our venerable friend as a kind of saviour." These names he gave, and the places where they reside, and I found afterwards that the California people were ready, everywhere, to second his testimony.—*Ibid.*, p. 476.

(51) *A System of Biblical Psychology, by Franz Delitzsch, D.D.* Edinburgh, 1869, p. 329.

(52) *Physiology and Pathology of the Mind, by H. Maudsley, M.D.*, pp. 15, 18.

(53) Epistle xviii; vol. i, p. 67. London, 1786.

(54) Intelligatur perturbationem (Senecæ, affectum) jactantur se opinionibus inconstanter et turbide, in motu esse semper; cum autem hic fervor concilatioque animi inveteroverit et tanquam in venis medullisque insederit, tum existet et morbus.—*M. T. Cicero, Tusculum Dispt.*, vi.

(55) *Bœthius, de Consolatione Philosophiæ;* lib. ii, met. vi, p. 209, London, 1823.

(56) Dr. Forbes Winslow, whose lamented decease we see announced while revising these notes, has collected, in the eighth chapter of his work *On Obscure Diseases of the Brain and Mind*, a number of cases illustrative of mental power and exaltation in insanity.

(57) *Traité de la Sagesse*, lib. i, chap. 15, No. 11.

(58) *Jamblicus, De Mysteriis*, lect. iii, cap. iv, p. 64.

(59) *Mental Diseases, Hartman, Jahr*, Manchester, 1857, p. 408.

Magendie speaks of a sixth sense, as if from (animal) magnetism, and exhibited by sleep-walkers, from which these persons receive the power of predicting future events; but he denies what his translator, Dr. Millegan, admits as barely possible.—*Elementary Course of Physiology, by F. Magendie, M.D.*, Philada., 1824, p. 89.

(59a) Dr. Abbott gave the Cotyledon umbilicus—grains five, night and morning—to a man aged 50, who had been subject to epilepsy every two or three weeks for five or six years. The fits entirely ceased, but the patient began to totter in gait, and *had*

attacks of partial loss of consciousness. The medicine was discontinued and the fits returned.—*American Journal of the Medical Sciences*, January, 1853.

(60) Exactly opposite to this condition of intellectual power and moral paralysis, which characterizes those whom, for lack of a better term, we call morally insane, is the state of intellectual imbecility and moral gentleness and truthfulness which belongs to the idiotic. Seguin says: "As a collective body, idiotic children are, in their institutions, equal in order and decency, in true lovingness, if not in loveliness, to any collection of children in the land."—*Idiocy, and its Treatment by the Physiological Method, by Edward Seguin, M.D.*, New York, 1866, p. 65.

VI.

PSYCHICAL NOSOLOGY.

By George F. Foote, M.D., Stamford, Conn.

The arrangement of psychical diseases into classes, orders, genera, and species, according to their supposed characteristics, has been a subject of much study, and considered an important adjunct to a proper understanding of this affection, and to its proper treatment.

If we were to go into a history of what has been written upon mental diseases, tracing up the line of thought emanating from different schools and nations, we should find the divisions are legion. Some of these are quite beyond the comprehension of a common observer, requiring the visual standpoint to be obtained only by a passive reception of theories, that appear more ingenious for their numerical divisions than for practical use.

And then, again, as to the definition of insanity, and as to the *essence* of psychical affections, there is a great diversity of opinions, hardly any two agreeing; and with some we find a disagreement as to the definition of terms used.

Upon this specialty there has been no paucity of books, and, like unto the general practice, there has been a commendable amount of industry displayed by writers. And while we admire the zeal in the effort to find some lesion of structure as the source of this disease, or some special organ, or its subdivisions, where a functional disturbance may be located, we cannot but regret that so much valuable time should have been spent in develop-

ing theories for subsequent writers to subvert, and that, too, by other theories equally objectionable.

NOSOLOGY, from νοσος and λογος, treats of the classification of diseases in general.

PSYCHICAL NOSOLOGY treats of the classification of mental diseases.

Of this latter, there are two natural divisions:

1st. Into those that relate to the emotional system; disorders of the mind.

2d. Into those that relate to the perverted intellectual faculties; disorders of the understanding.

The first of these is again divided into those of mental depression, termed *Dysthemia;*

And into those of mental exaltation, termed *Hyperthemia.*

The second is divided into abnormal conditions of the understanding, with manifest perversion and derangement of one or more of the intellectual faculties, termed *Paraphronesis;*

And into abnormal conditions of the understanding, with manifest intellectual weakness (or loss of wit), termed *Aphronesis.*

Under the class of emotional diseases, and the order DYSTHEMIA, we have:

Melancholia, grief.
Nostalgia, home-sickness.
Theomania, religious melancholy.
Erotomania, love-sickness.
Hypochondria, anxiety about the health.
Misopsychia, suicidal tendency.
Misanthropia, dislike to mankind.
Plantalgia, erratic melancholy.

Under HYPERTHEMIA, we have:

Mania, furious madness.
Amanomania, frolicsome madness.
Kryptomania, latent madness.
Kleptomania, irresistible propensity to steal.
Phonomania, irresistible propensity to murder.
Pyromania, irresistible propensity to commit arson.
Machlomania, irresistible propensity to sexual intercourse.
Doxomania, irresistible desire to be honored.

In the class pertaining to the disorders of the understanding, and under PARAPHRONESIS, we have:

Phrenesis, simple derangement.
Phrenitis, acute insanity.
Mantiphrenesis, disposition to spectral illusions.
Theophrenesis, illusion that he is inspired.
Dæmonophrenesis, illusion that he is possessed.
Zoöphrenesis, illusion that he is an animal.
Lochiphrenesis, puerperal mania.
Oniophrenesis, delirium tremens.

And under APHRONESIS, we have:

Amentia, dementia, loss of wits, mental imbecility.
Amentia acuta, acute mental imbecility.
Phrenoplegia, paralytic imbecility.
Leresis, dotage.
Apathia, stupidity.
Anoia, fatuity.
Idiotismus, idiocy.
Cretinismus, senselessness, mental and physical imbecility.

This is as simple as any of the numerous nomenclatures for psychical affections, and the one accepted by Jahr, though not without many misgivings as to its utility.

Homœopathy is so entirely opposed to the principles of allopathy, in all that relates to the treatment of disease; its theories, investigations, and the adaptation of means to the end are so unlike, that there are few parallel lines of thought or precedents that may be accepted or made available in curing the sick. And while we willingly give them all the credit of priority, with as much antiquity as they choose to date back to, we must not accept their teachings when they do violence to our own law of similia.

Under the old treatment the classified name, when determined on, rather than the symptoms, indicates the remedies. They deal with materiality; and with many of the modern and most popular writers upon psychical affections, the functional disturbances imply lesions of structure, and hence a material cause; the pathology of which, from their standpoint, duly classified, gives the key to and almost implies a knowledge of the required treatment.

Their medicines are similarly classified into cathartics, emetics, narcotics, tonics, astringents, sudorifics, diuretics, etc., etc.; each has a general duty pointed out as within its sphere of action, and with most of them a material manifestation is expected.

The physician who accepts the teachings of Hahnemann, and aspires to treat diseases homœopathically, can derive no possible aid from a study of this classification. He may read their Materia Medica with untiring assiduity, without gaining a thought that shall benefit his patient. And in a measure, this holds true in regard to the classification of diseases. No two of these are alike in the totality of their symptoms, no matter what class, order, or genus you put them in; as no two medicines are alike in their pathogenesies, no matter what head they may have been classified under. According to the above nosological arrangement, a patient may have dysthemia, but in the course of his disease he may have hyperthemia.

We have a patient recently recovered, who in the regular cycle of his disease, had under the class dysthemia, melancholia, misanthropia, misopsychia, plantalgia; and under the class hyperthemia, he had mania, amanomania, kryptomania, kleptomania, phonomania, machlomania, with great exacerbation at each full-ing of the moon.

It is the totality of the symptoms the homœopathic physician wants, and in this affection particularly, he must wait until the cycle of the disease has manifested itself before he has this totality.

To treat characteristics with classified names as they chance to appear, by medicines, without regard to the whole of the symptoms, would greatly jeopardize the prospect of a cure.

Most of the psychological diseases have periodicities, requiring days, weeks, and some even months, before the completion of the cycle, representing in the course of seven, fourteen, or twenty-eight days a variety of mental diseases, if we follow the nosology given us. Whereas these developments are but the expressions of a single disease, and should form a part of the whole picture, by which a remedy with a corresponding pathogenesis is to be selected as the curative agent.

Hence the importance of the continued presence of the insane,

that the physician may carefully note each change and development.

Hence again, the importance that the physician shall have sufficiently schooled himself into an abiding faith in his medicines, and into a consciousness of his own ability; a faith only to be obtained by years of experience and hard study.

The constant change of symptoms occurring within twenty-four hours, to be repeated the next twenty-four, or within seven, fourteen, or twenty-eight days, are constantly appealing for an intercurrent medicine, with a manifestation known only to psychiatic affections. To accept these as a manifestation of the disease, or of the disease aggravated from the irritating effects of a well-chosen remedy, simply to record them in your diary and wait, requires courage.

Insanity is not an acute affection that portrays itself within a quotidian or tertian type. The disease is chronic, and it is only by noting these changes over a lengthened period of time, that we are enabled to group the symptoms, so as to select a curative medicine.

The psychiatic physician of all others must not treat the names of diseases. He has to do with symptoms, and whether the disease be functional or physical, the symptoms are the manifestations. The most prominent of these may be termed characteristics, which may guide him to a few remedies with similar characteristics.

From these, by comparison, the one curative medicine may be selected, and when given he should confidently wait for the results, with as much assurance as he would wait for the effect of any other known cause.

VII.

THE RETENTIVE POWER OF THE SENSORIAL FACULTIES.

By C. G. Raue, M.D., Philadelphia.

We find in Henry Maudsley's *Physiology and Pathology of the Mind*, pp. 15 and 16, the following passages: "Everything which has existed with any completeness in consciousness is preserved, after its disappearance therefrom, in the mind or brain, and may reappear in consciousness at some future time. That which persists or is retained has been differently described as a residuum, or relic, or trace, or vestige, or, again, as potential, or latent, or dormant idea; and it is on the existence of such residua that memory depends." And further on: "Consciousness is not able to give any account of the manner in which these various residua are perpetuated, and how they exist latent in the mind, but a fever, a poison in the blood, or a dream may, at any moment, recall ideas, feelings, and activities which seemed forever vanished. The lunatic sometimes reverts, in his ravings, to scenes and events of which, when in his sound senses, he has no memory. The fever-stricken patient may pour out passages in a language which he understands not, but which he has accidentally heard; a dream of being at school again brings back, with painful vividness, the school feelings; and before him who is dreaming, every event of his life seems to flash in one moment of strange and vivid consciousness." And on page 17, "So far from the mind being always active, it is the fact that at each moment the greater part of the mind is not only not conscious but inactive. Men-

tal power exists in *statical equilibrium* as well as in *manifested energy*, and the utmost tension of a particular mental activity may not avail to call forth from their secret repository the dormant energies of latent residua, even when most urgently needed. No man can call to mind at any moment the thousandth part of his knowledge. How utterly helpless is consciousness to give any account of the statical condition of mind! But as statical mind is in reality the statical condition of the organic element which ministers to its manifestations, it is plain that *if we ever are to know anything of inactive mind it is to the progress of physiology that we must look for information.*"

In these passages we do not find anything new as regards the retentive power of the sensorial faculties; they confirm what psychological observations have long since disclosed, and from a standpoint which assumes that any information of statical mind (vestiges) can be expected only from the further development of physiology. Without going into the discussion how far nervous structure participates in the development and execution of mental processes (that it is a necessary link between the internal stimuli and the primary sensorial faculties of the mind is sure enough, and is proven by the fact that conscious developments do not take place until nervous structure makes its appearance), it nevertheless will be well here to refer passingly to the utter impossibility of ever explaining the transmutation of material processes into psychical phenomena. It is, therefore, difficult to understand how physiology will ever become capable of unravelling "inactive mind." Maudsley makes the assertion "that every phenomenon of mind is the *result*, as manifested energy, of some change, molecular, chemical, or what, in the nervous elements of the brain." "Chemical analysis of the so-called extractives of nerve," he says, "testifies to definite change or 'waste' through functional activity; for there are found, as products of retrograde metamorphosis, lactic acid, creatin, uric acid, probably also hypoxanthin, and, respecting the fatty acids, formic and acetic acids. These products are very like those which are found in muscle after its functional activity; in the performance of an idea as in the performance of a movement, there is a retrograde metamorphosis of organic element; the display of energy is at the

cost of the highly organized matter, which undergoes degeneration or passes from a higher to a lower grade of being, and the retrograde products are, as far as it is at present known, very nearly the same. While the contents of nerves, again, are neutral during rest in the living state, they become acid after death, and after great activity during life. The same is the case also with regard to muscle. Furthermore, the products of metamorphosis of nerve-element, after prolonged mental exercise, are recognized in an increase of *phosphates* in the urine, while it is only by supposing an idea to be accompanied by a correlative change in the nerve-cells that we can explain the exhaustion following excessive mental work, and the breaking down of the brain in extreme cases. These things being so, what is it which, in a physiological sense, we designate the *mind?* Not the material products of cerebral activity, but the *marvellous energy* which cannot be grasped and handled."—(Maudsley, p. 39.)

This is certainly an infinitely more advanced conception of mind than the coarse views of Cabanis and Vogt, according to whom the brain secretes thought as the liver secretes bile. In fact this passage has been written in refutation of this view. And while it endeavors to come nearer to a just appreciation of mind as we view it, it still is only an hypothesis which scarcely will stand before a scrutinizing examination into all the physiological and psychological facts. In the first place, it takes for granted that the nerve-cells are the receptacles and laboratories of sensorial activities. This is by no means physiologically proved, and by the latest researches of Max Schultze, made even quite problematic; for, according to these researches, the nerve-cell is essentially only an enlargement with nucleus and nucleoli of the axis-cylinder, an intermediate station for the convergence of innumerable nerve-fibrils from different regions, in order to unite to and form one axis-cylinder. But even here the axis-cylinder cannot be considered as *originating* within the nerve-cell; it is only made up here, like the bulk of a main stream, from numerous tributaries, the sources of which no one has yet discovered. Thus the nerve-cells, which have been considered as the *sources*, turn out to be mere stations, where primitive fibrils from various regions meet, in order to form new com-

binations; but they are neither the receptacles of the external stimuli nor the laboratories for the sensations derived therefrom. Secondly, it is a mere assertion to maintain that every phenomenon of the mind is the *result* of some change in the nervous elements of the brain. With the same right we may assert that the correlative changes in the material substratum are the result of mental activity, for we see will-power quite often hold in abeyance not only the special workings of the mind, but also the entire bodily frame. This, however, will always remain a bone of contention, because "*correlative* changes in the material substratum" depend, as the form implies, upon *reciprocity*, and to determine in each single case which is cause and which effect may not always be possible.

So must also the once cherished conjecture, that mental activity is based upon the consumption of phosphorus in the brain, "because phosphates appear in the urine in consequence of a retrograde metamorphosis of nerve-substance," be consigned to the "*dreams of science*," as even Virchow admits.

Maudsley at last recognizes the mind to be "not the material products of cerebral activity, but the *marvellous energy* which cannot be grasped and handled." A marvellous energy of what? Of the brain. As the working of a steam-engine represents its "manifested energy," so, says he, "thought represents the energy of the nerve-cell." At first sight this reasoning appears very plausible, indeed, to some minds, even convincing. But even if we pardon the error as regards the nature of the nerve-cells, its main fault is that it confounds *condition* with *cause*. The working—that is, the functional manifestations—of an engine is not at all *its* manifest energy; it is the energy of a something altogether different from the engine, namely, the energy of *steam*, which, however, must find an appropriate mechanism to manifest itself just in this way. The engine is, therefore, not the *cause*, but only the *condition* of its so-called "manifested energy or function."

So is the brain, or the problematic virtue of the nerve-cell, only the *condition of mental* phenomena, or its marvellous energy, by and through which a something, altogether different from the brain, namely, the *soul*, manifests itself as the *cause* of all this

marvellous energy. We have here an example of the "powerful," and now fashionable "tendency in the human mind to make the reality conformable to the idea, a tendency which has been at the bottom of so many views advanced in physiological psychology, to convert marvellous energies into objective entities, or allow them to tyrannize over the understanding." And here applies fully what Goethe says:

> "By that I know the learned lord you are!
> What you don't touch, is lying leagues afar;
> What you don't grasp, is wholly lost to you;
> What you don't reckon, think you, can't be true;
> What you don't weigh, it has no weight, alas!
> What you don't coin, you're sure it will not pass."
>
> —(*Bayard Taylor's translation of Goethe's Faust*, part ii, p. 18.)

But this is not all. The "marvellous energy" does not advance us one step in discriminating the different sensorial faculties in regard to their different degrees of retentive power; a point which is so obvious to the observation of the psychologist, and of which I have spoken in one of my former articles on this subject. Where has psychology ever found a difference in the nerves or nerve-cells to warrant the acceptation of an equal difference in their energy? In the course of centuries, perhaps, it may. In the meantime, however, we must rest satisfied with what psychology proves, that the primary sensorial faculties graduate in their retentive power from the highest to the lowest senses, and that in this gradation is founded not only the clearer knowledge we gain from the outer world by means of the higher senses, but also the moral norm which places man at the summit of this mundane creation.

VIII.

MIND INFLUENCE IN THE CURE OF DISEASE.

By T. L. Brown, M.D., Binghamton, N. Y.

"Truth can never be confirmed enough,
Though doubts did ever sleep."

"In ourselves the mind-force dwells,
From ourselves its influence swells;
By ourselves its life is fed
With sweet or bitter daily bread."

To what extent the will or the impressions of objective or subjective thought sustain and retain the force necessary to restore the molecules of the body to their healthy position when once displaced by morbid causes, is not yet clearly understood.

The influence of an idea is controlling only while it is regarded as true, especially if put to the test of utility.

Mind, as we comprehend it from our standpoint of knowledge, is that force or power which receives, retains, and utilizes the consciousness of matter; and can often, at will, recall objective impressions, subjecting them to proper use.

Mind seems to be found connected in some mysterious way with matter only.

Its power, in the cure of disease, can be properly estimated only by observed results.

The *how* or the *why* is still veiled in mystery. To use this power in the cure of disease is the undoubted duty and practice of every liberal and liberty-loving physician. The curative

influence that the mental state of a patient exerts upon his recovery is often undervalued by his physician.

To arrange after the valuable plan of our homœopathic Materia Medica the symptoms caused by joy, fear, hope, anger, avarice, disappointment, and other mental emotions, will, we trust, be a good way to utilize mind influence as remedial. Quite enough is already known, to lay the foundation of a practical psychological Materia Medica. To classify the symptoms and conditions, caused or cured by different states of mind, must of necessity be the subject of our next paper.

Who will deny that the cure of some patients is almost wholly under the control of ideas held by them?

> "Care to our coffin adds a nail, no doubt;
> And every grin, so merry, draws one out."

If mental impressions and reflections can lessen life-force, and change its healthy standard, why may they not, in the light of the law "Similia," replace the loss? This essay is not presented to advocate a theory, nor to defend a law, but to bring out facts, and excite discussion upon the curative power of mind influence.

An agitator is he who kindles the fire of thought that burns out error. That the natural law of molecular affinity existing in the blood-cell can be disturbed in its relation to health by certain mental impressions, is no longer doubted, and has a foundation in fact.

What numerical potency, or dilution, intense joy attains, in order to produce death, is not yet known by either our high or low potency men.

When taken in an old school crude dose, does it act like prussic acid on the life-force, and kill as quickly?

By some certain law, thought kills in one case and saves life in another, just as surely as light dispels darkness.

To know the time and place, to observe and obey this law, is to increase the skill and art of curing the sick and preventing disease.

Under certain circumstances, joy and grief can act similarly to some animal or vegetable poisons in producing or removing abnormal conditions; hence, why not give them their proper

place in our new psychological Materia Medica as valuable agents of cure?

Skill, in making the right mental impression on the mind of our hysterical or hypochondriacal patient, has as much, if not more, to do with the cure as the drug given. In fact, to *know* what single agent has begun or completed the cure of any diseased action is to be very wise indeed.

To know just when to use joy, grief, fear, or pride as curative agents according to the homœopathic teachings has not as yet been properly recorded. Shall we not try to learn the use of thought influence as an agent of cure, as we now so confidently prescribe Nux vomica, Arsenicum, Belladonna, or Gold? How often has a well-founded hope of competency dispelled the fear of poverty as quickly and certainly as a high potency of Gold administered has cured a tendency to suicide? Why not, in the truth of our law of cure, place different thought influences as so many agents for specific use in the cure of symptoms or condition similar to those they have been known to produce?

A psychological Materia Medica, arranged after the homœopathic standard, would doubtless be a valuable addition to a physician's library, and quite useful and suggestive in many cases. It could be more frequently consulted with benefit, perhaps, than the drug physician would be willing to admit.

Shall the power of mind-influence be left rather to the professions of law and theology, or shall physicians learn to use it in a new way in maintaining health, that condition of life the nearest and dearest to all our race? Why not cure a patient as quickly by mental impression wisely used, as to kill a man by the thought that he is bleeding to death, and not a drop of blood leave vein or artery?

In proportion to the amount of scientific knowledge men obtain and put in practice will disease decrease and health increase.

To lessen the idleness and ignorance of mankind, by the power of knowledge and industry, is to meet diseased action on a line where its defeat becomes certain. In fact there can be no mental state, no idea, that does not in some degree influence its possessor toward a condition of either health or disease. To place in a

more practical light the various mental states common to man, as valuable aids in the cure of the sick, will be my future effort.

In most chronic diseases, the state of the patient's mind has more curative control than many physicians have credited when reporting their wonderful cures by drug action.

During the past ten years, in the treatment of chronic cases, I have endeavored to establish, as my first and most important duty, a hopeful and contented state of mind in every patient.

The good results therefrom have been too obvious to allow me to neglect my responsibility to this Institute; and therefore, with this paper as a leader, as soon as facts can be classified and put into a practical form, I will place them before you for critical discussion or practical use. Stimulated by the thought that our medical school and usefulness will be increased in the right direction, I shall continue my labor upon this branch of medical inquiry.

"We live in deeds, not years; in *thoughts*, not breaths; in feelings, not in figures on a dial.

"We should count time by heart-throbs.

"He most lives who thinks most, feels the noblest, acts the best."

IX.

POPULAR PSYCHOLOGY.

By G. W. Swazey, M.D., Springfield, Mass.

Physiology may not be in fault, but we seem to need some knowledge concerning the functions of animal life, and the laws which govern it, which psychology stands ready to supply; and whatever pathology leaves for conjecture, concerning the ills and ails which interrupt these functions, young psychology is ever ready to rise to explain, seeming ambitious of a name in the art of healing.

There is one aspect to psychology which medical doctors can well afford to leave to divines, with the things of their faith, while we confine ourselves to its physical outlook and to palpable works.

Her place in therapeutics must depend upon the characteristic facts which she brings to our notice.

We have to make no room for a new science. Truth always makes room for itself, coming not as an invited guest to be entertained of us, but heralding her own advent.

It is only incumbent upon us to admit her through the door at which she knocks, and often have we had occasion to confess that, when found standing before our prejudiced minds, she has seemed quite a stranger.

The psychic or soul-element has always been recognized a power for curing the sick; while, at the same time, it has been believed to be a prolific source of diseases.

Now, how much it may have to do for good or ill in shaping

their protean forms, what of it is bane and what of it is antidote, must be to every practicing physician a question of great importance.

When exhibited in its curative energy, it is apt to be looked upon as an imaginary rather than a real force; or, if real, as so like some myth that it seems to lay outside of ordinary requirement, or so miraculous as to be beyond admissible use.

Now, while we may sometimes lose a point by a too cautious play, yet the holding of such a subtlety in respectful abeyance comports well with the dignity due to science—especially to the uncertain science of medicine—and hence we should make no haste to follow the lead of any enthusiasts.

No more should the spiritualistic philosophy of our times beguile medical men, than should the dogmatism of former days be allowed its power over them.

When the psychic force is in some of its abnormal work, doctors of every school find themselves at their wits' end. Sometimes they stand aloof in contempt of the resistless force, and sometimes they stand aghast in dismay. Sometimes armed with depletives, they enter the fray, and again, as non-resistants, they stand apart, courting the dull theories which theology or demonology may offer, and pass by like the Levite.

Thus while between ignorance, incredulity, or superstition we may often fail to recognize its benign work in the common walks of medicine, so on the other hand we *may* become too unmindful of its insidious poisoning at the sources from whence the bodily functions are supplied.

Under all conditions of life does the psychic force seem so potent, that in the light of what we call advanced medical science, we have been obliged to accord it rank in our therapeutics, and have given it respectful indorsement, by appointing a Bureau of Psychological Medicine.

Something equivalent to this is being done in other quarters, and such attention given to the subject seems at least a partial acknowledgment of its being or affording an available power.

Many of those symptoms so common with our patients, under the head of moral, nervous, and cerebral, have, with observing men, come to mean more than mere excitation of the nerve,

something else than the neurotic or physical condition of the organism; but the difficulties in the way of making a proper distinction between such interior and intimate forces, as between the state of the palpable nerve and that of its neu-aura, we do not attempt to remove, and are content to say that many such symptoms seem, as we allow ourselves a ken beyond the morbid matter, to be positively and purely psychic.

Although physiologists may claim to have discovered that mental action is the resultant of a vital chemistry (which failing to comprehend, we will not deny), yet it may be at least convenient for us to adopt a method of applying our mental optics to the conscious inner man, which accords with the ever shifting phases of our diseases, and with a spirit of progress in the healing art.

Possibly, too, the condition of the sensorial organism, and the scope of drugs, may have too largely engrossed the attention of the profession, but the more reflecting practitioner of our school, which cultivates a knowledge and use of dynamic medicine, will never fail to notice, and perhaps explore, with a view to help the psychic condition of his patient.

We are not disposed to call psychological medicine a *system* of cure, although we are constrained to accept a pathology of the mind as well as of the body.

Rather does it simply bring to our investigation a status or condition of elementary life, becoming so in ways we may or may not be accountable for, but which being ever in ceaseless effort, may become the handmaid of beneficent science, or the subject of a debasing will, the ready conservator of health, or sadly otherwise, just as anybody's life may prove itself a blessing or a curse, by the circumstances which are allowed to control it. Morality and immorality *alike* give it active character.

Every kind of soul, or, if you prefer the term, every kind of life, together with its particular material body, seem to make a unit, and to be one in the condition of health, just as they become one in act by the even play of vital power and functional operation, and apparently correlate in the derangements to which either is subject.

Now, so far as we would think understandingly of this com-

plex structure, and its ramifying, and, perhaps, correlating forces, and the work which we as doctors have to do with it, we should, without bigotry or prejudice, give to each department of life a separate and due share of our attention.

In doing this we shall not fail to observe two kinds of symptoms in our patients, a two-tongued betrayal of their real condition; not merely the symptoms which belong to the body, as distinct from those which belong to the mind, but also a quality of both the physical and mental sensations, which appear to be given them by the psyche.

Even in infancy this revealing is often as plain, and sometimes plainer, than comes by word of mouth. The eye always speaks to us, and the temperament invariably points to the controlling forces of life. The make-up of the child, besides showing its present health, often reveals its history, and at the same time its probable future.

Indeed, every case which invites our attention seems to present something of this dual character, made apparent by the play between the physical and psychical forces.

The condition of the patient is thus manifested through the sensations, the temperament, and a characteristic predisposition, all of which, so far as we can see, have a psychic as well as a physical quality.

Thus it is that all animal life seems to be endowed, but in health, when the whole organism works in harmony of action, it does not often require attention, and never interference.

It is only the conflict of forces that indicates our professional work, for the "*whole* need not the physician."

When the machine runs well, men go about their business aware of nothing but life in its pleasurable use, but by its becoming worn, and weak, or being in any way abused, they begin to realize more fully their double-acting mechanism, and to consider the damage done it with alternate hope and fear, and an anxiety concerning the kind of skill requisite to repair the loss.

Men of experience will agree that health is best preserved while we have it, and soonest and most completely recovered when we have lost it by due estimation of the psychic element

ever at work in the human organism, in sickness and in health, in the physician as well as in his patient.

They will further agree that we can give to animal life, new qualities, and forms, and degrees of vigor, by careful application of the facts which indicate, and even force upon us, the cognizance of our psycho-physical constitution.

We might go farther and claim that "unavoidably" the human race are about as responsible for the contour of their bodies, for their muscular power and movement, for the tone of nerve, and cast of mind, even in their progeny, as stock-men are for the stamp of the racers they produce, and bring to the course for speed.

All people are justly proud of a good physical development, of uncommon strength, or fine physique, acquired by training, but how much better might it have been, and ever might it be, to secure these qualities by the endowment of blood.

Development of mind and body seems not less an inheritance to the human will and understanding, than it is an inherent force in nature, reaching ever towards a brighter future; and so will it, till the human organism, which seems to be the masterpiece, shall be able to centralize in effect, as it evidently does in qualification, all the resources of life, whether above or below it, till the human psyche and its body again become able to focalize nature's subtle forces with such common results, that miraculous cures (which means wonderful, and it were well had it never have been made to mean anything more), will cease to fill us with astonishment as they do now.

If there is a fontal power, whether in the psychic, or in some remedial dose which goes forth performing gradual cures, whether by some sanative power of its own, or by provoking efficient natural laws, what is there incredible in the account of its working at times on the instant?

That this cannot always be expected, arises from processes requiring time in the self-limited stages of some diseases. Thus variola could never run through the stages which make that disease what it is, without time to measure them. Remarkable cases, such as we refer to, will generally, if not always, be found to be those of another class.

Some of us remember well the time, when the idea that a man's lifelike picture could be taken by the light, and suddenly fixed upon a silver plate, was hunted down as a popular delusion.

We were familiar with heads on silver in those days, but to put heads there by the focalized sunshine, though taxing the credulity, so pleased the imagination of some of us, that hoping it was true we tried it, and nowadays it would evince a weakness to doubt our ability to catch and fix the figure of a flying bird, or the fleetest horse while in motion, or the form of the dashing spray.

Often, when our photography was young, have we sat motionless before the camera with steady gaze for a long hour, imaging our features upon the silver made ready to receive the impression, and with poor success at that, owing to the then undeveloped art. So do we try and try again, and take the time of patients, to perform a cure which, through a greater skill, we might accomplish much quicker. And as we lament our insufficiency, let us hope that our continued effort will advance us in the sublimer art of healing, till, as just remarked, we acquire the power of focalizing nature's subtle forces, with more and quicker effect upon the sick, not only by potentizing our remedies and sensitizing our patients, but by the added power of the always potent psyche.

Let the free sunshine represent a psychic aura, or soul atmosphere. Let our rational intellect be in the figure what it is in reality, a kind of converging lens, so shall we carry its force, and produce upon a receptive subject any effect, more or less speedy, and to be estimated by the quality of that aura and our own mental condition—an effect not confined to the mind alone, as all experience testifies.

There appears to be nothing in the mind of man which limits the study and ken of itself and its powers. We go to the ocean's depths for a highway for our thoughts, and away to the stars, with our spectral analysis, to discover how they move and have their being. Do such thoughts seem fanciful or irrelevant? Then account for mesmerism, with its coterie of kindred wonders, and the startling phenomena of rapport, and clairvoyance, and trance, and somnambulism, and such astonishing mind-work

seen everywhere; also for the no longer disputable power of high attenuations in medicines over fearful diseases, and for the everywhere remarkable results in our practice, from means almost insignificant, which are unsettling old theories, and driving the thoughtful to some solution of the facts which they cannot gainsay.

We do not follow inquiry into the nature of the soul's life which we are conscious of having, nor whether or not we have any element of life in us to survive the wreck of these mortal bodies, which we know will soon be disintegrated by some process or other (possibly by cremation, if we live to become less in love with the fashion of our clay).

Whether human bodies are built up for waiting souls, or whether souls are the natural results of constructed bodies, or whether, indeed, soul or body is susceptible of any extra mundane influence, we shall not now inquire. These are questions we leave entirely open, so that our psychic allusions by this restraint will be less likely to become *il*lusions, while we endeavor to avoid confounding our real knowledge of visible things with our speculative knowledge of things invisible, if indeed any such distinction can be made, after allowing, as we must, that things which we call visible are only so by an aggregation of atoms, and that of these atoms, as the chemist tells us, no single one of them out of which the world is built up has ever been seen by itself. Nor need we advance any opinion whether, in symptomatology, the physical or the psychic should be considered of first importance, or which in any given case should take rank in our diagnosis. Also whether moral condition is anything in the diseases of the lower animals, or what it is, would be best considered after discussing, as we shall not here, the nature of the different kinds of souls which we different animals have.

All these questions, also concerning the way the psychic power under consideration may have come to crown our being with the masterly or superior degree that it manifestly has, and comes into play, in lower and different degrees, through all forms of conscious life, as it probably does, must be avoided. Whatever may be the nature of any kind of spirit, or the nearer quality of its perispirit, we leave to spiritual scientists, and confine our-

selves to the importance of observing the work, and thereby acquire the means of controlling a force which everybody is alike ready to recognize. As we have bridled the electric and other subtle powers to do our bidding, so may we make a servant of this, as of any known force in nature.

Accordingly we now hope to answer, in some measure, the end of our appointment, and subserve the interest of science, and the good of our afflicted race, by a brief review of the force under consideration.

Our success in this would vary, of course, as in other things, by a more or less knowledge pertaining to the human soul; but under the proposed restriction in our discussion, we are barred from making any attempt at this, and we only claim, what everybody will admit, that we have all seen enough to be well persuaded of a wonderful mastery of the psychic over the bodily functions and their diseases, both in its static power as well as by a stimulated energy, and so, too, has everybody *seen* it, *felt* it, perhaps, like wild waves in a tumult.

Most people, from a common credulity and some observation, are more than half convinced that not only functional derangements, but organic lesions as well, are cured through psychic influence, or some branch of that medical science we name psychological.

That they are mostly charlatans who undertake a system of cure without medicines in some form, we cannot doubt, but after all, what say the authorities and all physiologists upon this subject?

One of the most distinguished men now living, to enlighten the people, says: "I have followed the schools of science and gathered from them as much as I could, and, taking the physical facts, have reached the conclusion that there is nothing so admirably constructed as the record which was furnished and finished eighteen hundred years ago;" and further says: "If you study the writings of scientific men, you will see that they in no case disagree with the writings of the Evangelists.

"I think it will be ultimately found that Jesus Christ is the greatest scientist the world has ever seen, in respect to the mind and the control it may exercise over the body. I have no fear

that science will ever sweep away one of his fundamental doctrines or illustrations."

The severer the examination, the brighter they will shine.

Accordingly, if we should draw upon this well-attested record for illustration of our subject, we might therein find that a man was once quickly cured of hereditary blindness, by the application of clay and spittle to his eyes; that a woman also, after fruitless dosing for twelve years, was instantly cured of an issue of blood, by means apparently of still less significance; but quoting these cases, and many like remarkable occurrences found therein, might expose us to criticism from those who hold them by association too sacred to allow of their being taken out of the category of events confined to the exercise of a superhuman agency; so we pass them with the single remark that, whatever way they point, they probably contradict no settled principles, and set no laws of our being at defiance, but rather fulfil them in a degree which astonishes people who have not seen things after this fashion.

We have no desire to expatiate upon wonders, to be able to perform them, or to follow after those who do. We are only anxious to get at the right solution of acknowledged facts, which may help us to greater success in our efforts to save the sick from merciless drugging, compared with which the harmless arts of necromancy, as a boon and deceptive "expectante," is vastly safer.

With a care not to intrude upon theological grounds, we cannot say much about the account of wonderful cures, so generally accepted as true, to be found in our sacred writings, and would not venture an argument at all based upon some of them; but we submit when Peter and Paul, and their colleagues, appear upon the stage, their doings belong to history and to science.

It would be a solecism to inquire if there was any "modus operandi" in the work of curing the halt, as they did; and, without discussing anything so self-evident, we call attention to the complement of power which their cases present in the "consensus animi," apparently an essential element in the work of cure, and which resided in the patients. That which contributed to inspire their hope, seems to have been as necessary as the other

marvellous power exerted upon them. This has been called faith; and if that is the best word to express it, we need not forget that such means are just as available as ever, and probably as efficient, and we may add that nothing attended with such beneficent results could have been in any degree subversive of natural law, but might evince the summoning of a higher one than those we are at present and better schooled in.

Everywhere do we see that some laws are held in restraint by others, chemical by vital, physical by moral. In every motion we make upwards, the law of gravitation is so far held in suspense. Thus the will holds a higher law, and prevails for a time over it.

We do not evade the arguments which would be offered by those who see nothing in them but an imposing show of a specially delegated power, and simply remark that we consider it absurd to admit these cures and yet deny to them an organic law.

Miracles of power though they are, as we freely admit, they are, at the same time, the advance cases, which illustrated centuries ago, as they still do, and will continue to do, a stupendous truth, and show that higher laws are concerned in the regulating of vital or dynamic forces than our sensuous philosophy is always ready to admit.

Whatever conclusion might result from a more interior view of these cases, when put upon such a record, and under such circumstances as insure the confidence of the Christian world, in a display of curative power, although in part only through the psyche or mental emotions of the patient, we claim them for science; and whether the force exerted upon them was an orderly and salutary psychic force or not, or whatever it was, we still claim them for science.

They are alluded to, because so few will doubt their authenticity, and in point of argument, cover the whole ground of a plea for rational psychology, unless, as may be claimed, they are exceptional cases of cure without law, or by laws which could not be repeated, and that this was not so, we think our common experience may furnish all the evidence the case requires.

Those cripples could have been in no nearer contact with the soul of souls, assuming that there be such, than every man who

has lived from that day to this, so far as we can see, and hence one reason why these cases and their class deserve a place in medical science of to-day, as well as any others, and if valid testimony is anything, they may well head the list of their kind.

Now for the more complete view of this interior work in the animal economy, we subjoin another brief account, which with most people is of equally good authority. (*Facts*, p. 27.)

It refers to the lower animals, and to the lower animal soul, and exhibits the enlargement of our idea of psychic force as just intimated, and which if admitted relieves us of the necessity of any further illustration, although they are to be found in daily observation, and on every hand.

In this account we discover the wheel within a wheel, whose ceaseless motions, if we mistake not, have literally determined the status of man and beast to this day, and whose perpetual work has ever been, and will ever be, to give character, quality, and form to all sentient life.

Let us put the account of Laban's flocks and herds at Padan-aram beside this record of mind-work just quoted, and the forces which belong to the animal soul are indicated as the complement of human psychology. Facts, like wine, are supposed to improve by keeping.

If the experience of man for a thousand years attests to the truth of anything, it should be considered most reliable, or if a long observation has failed to show the untruth of a principle advanced as true, we may well claim it as truth, at the hands of those who have thus failed to disprove it.

This story of most remarkable results from the cattle gazing at the pilled poplars, which Jacob put in the watering-trough, is too familiar to need repeating in detail.

His device was that of so arranging whitened rods, that when the cattle came to drink in the gutters, their attention was fixed upon an unusual appearance of curling white lines, or a wavy glittering in the agitated water, and that managed well as to time of conception, enabled him to change the color of old Laban's lambs, kids, and calves. The shrewd young herdsman was by contract with Laban, to have all the ring-streaked and

spotted for his wages, and of course he made as many of them as he could.

This account is alluded to as holding in its interesting details a fact undisputed, and to which ages have granted continued assent, and give it the force of an admitted truth, that even in the animal soul are produced and carried forward, convincing evidence of the strangely incomprehensible power of mental emotions, within which, if anywhere, resides the psychic force.

It is thus shown beyond much question that from the physico-emotional sphere of parents, there is evidently derived a tendency to organic forms, and to new combinations of tissue, which will continue as long as the organism does which is thus derived, unless controlled by some kind of medicinal or moral interference. Beauty and deformity, ability and inability, color and size, temper and tone, in short, physical direction and destiny are impressed upon embryotic life through mental emotions, which also implies that a correcting or counter-force may at the same time reside in the same influential sphere.

We are not informed whether the expedient which Jacob resorted to in order to change the color of his cattle is in vogue at this day, but if not, why not?

Nature has not altered her "regime," but man may have lost in a degree his ability or desire to control some of her interior forces, the application of which to human life is perhaps all that can save it from slow self-destruction. The feebleness which happened to the old man's cattle was not a mere happening, we see.

Deterioration in a race is as much under a law of losses as improvement in races is by the law of progress.

How it was that the senior herdsman knew nothing of the cause of the speckles and ring-streaks or grizzly blood in his cattle does not appear, but if our present estimate of genius furnishes any criterion, it is certainly no marvel, for who so well could have made such a discovery as the ambitious young Jacob, with little to do but to watch the mating of the herds which he tended during that twice seven years of waiting for his own loved consort?

Wonderful discoveries might have been expected under such

favoring circumstances, but would naturally point to the coming man for fulfilment and record.

For two thousand years at least, and possibly for twenty thousand, was the fact of the electric force known. The ancients knew it as the soul of a resin picked up on the shores of the Baltic; but the coming man had not arrived who should find multitudinous sources of this restless soul, and put it to the harness and to use, till just the other day. Now when, and from whence, is he coming who shall show us how to make the most of our bodily functions, working under such mysterious pressure, and how to convert most usefully their strange psychic power?

It being unceasingly active, we are on professional duty as its guardian, and must at the same time stand on watchful guard for ourselves, its ally, in every effort to attain unto, and *retain* the great desideratum of human life, the "*mens sana in corpore sano*;" and notwithstanding the discord so often struck upon our own nerves by conflicting emotions, we are under obligation to protect and defend the suffering patient, and must trust that such discord may prove in the end to be one of the harmonies not understood.

How the psychic is commonly recognized, and how we may make use of it, shall in a word be considered.

1st. Does it appear as an animal magnetism, the verity of which force nobody now questions? We know how to deal with it as well, or *only* as well, as a few years of shy observation, and a timid testing of its wonder-working force will permit.

What is its anæsthetic power, and wherein is its power of exalting thought and sensibility? What is its curative energy, and what we know of its bewitchingly absurd revelations, need not now be told.

2d. Does it appear rather as the od-force of mesmerism, according to Richenbach and the lexicon?

Then should we apply ourselves to the study, and inquire again concerning the dynamic, with this new name. If it prove to be all one with the psychic, we may proceed from its recognized data and facts to cultivate anew an old acquaintance.

3d. Does it appear as altogether one with the power of sympathy?

Let us see that we fail not to wield a power which works out our good, by the law of Similars, and thus closely allied to the Homoion.

4th. Does it appear like a still small voice from within, whispering of faith and better things, or from without, promising to reveal the silver lining of the cloud, and to beget trust and hope in the discouraged heart? We have in this, when cultivated, no insignificant power to stem the force of almost any disease.

5th. Does it appear what is vaguely termed the power of imagination? As the will-o'-the-wisp shines only to decoy and tease us, so by keeping our temper with vagaries, we may dally awhile with their freaks, and win the golden opinions which give us real advantage, and possibly confer thereby an essential benefit to the discomforted.

6th. Does it appear as a dynamic power of special right or gift? We must leave them to use it in their own way, who think they are thus fortunate; but we need not repine at a better lot, which consists in the opportunity to make ourselves what we desire to be, without special gift, or being dependent upon anything but our own reason, intelligence, and integrity.

7th. Does it appear like that bewildering power which unveils itself only for the working of wonders, and breaks upon our astonished view only by the practices of pretenders and mountebanks? We might venture to pry further into some of the veiled secrets of nature, and find out something more concerning our mental atmosphere, and what is meant by the sphere of one person impinging upon the sphere of another, and whether opposite temperaments are indeed polarized, or whether polarity is anything at all in flesh and blood, and whether the terms positive and negative have any scientific meaning when applied to animal life.

8th. Does it appear under its true name of psyche and in the character we have presented? So shall it ever live to save dying matter from dying utterly, and thus perpetuate it in ever new forms of life, and by its plastic power, with our help, as we have herein indicated, display her resources for bringing man into the true order of his life.

Take away the soul and things have no meaning; verily what shadows they become! Better follow it with Pythagoras than *ever* to lose sight of it.

To aid in the great work as the medical reformers we are known to be, we should take our stand somewhere to conserve a true psychology, in order to avoid, and if possible to hedge up, the byways into which the mercenary spirit of our times leads so many doctors.

A few suggestions may serve to guide homœopathists, while other schools will follow their own.

1st. To set the heart and mind right in conscious integrity for the benefit which thereby accrues to our psychic influence, and thus adds to the power we need in our professional work.

2d. To investigate any alleged facts with a fearless scrutiny, for the benefit which every man gets by thus purging himself of prejudices, and thereby admitting into his mind the light which new facts and science so liberally shed.

3d. To make careful use of means always safe, even when the susceptibility of the patient is greatly increased by his disease, and thereby save our sick ones from an ordeal of drugging, which is so apt to derange the normal functions, and supplement a small confidence in the "vis medicatrix naturæ" with an officious and mistaken interference.

4th. To study with care every law of cure, if there be found more than one, and use every palliative which will offer no hindrance to the kindly efforts of nature, and no bar to the effects of curative remedies already in use, and thereby retain the confidence of the patient, and prove ourselves fit for an emergency.

5th. To take a conscientious stand upon some one platform of principles or another, or plainly ignore *all* principles of treatment, so that honest patrons may know where to find honest doctors, and so that we do not disgrace the profession with a living image of Janùs in the very doorway, an obsequious homœopath and allopath by turns.

6th. To keep a steady eye upon allopathy, as we have known it, in order to shun it; upon eclecticism, in order to save them, peradventure there are five righteous in their city; upon hydropathy, in order to make available its ablutions, its discutient and

solvent and thermometric uses; upon homœopathy, to guide us in every emergency requiring the administration of medicine; and upon sympathy, its handmaid in principle and in work, to render its aid by quickening the salutary effects of the means in use, and to assist in overcoming all imaginary foes, and thereby to acquire strength for the health-giving psyche, and the power of resistance in whom she would make sick or make mad.

7th. To make continued effort to advance the healing art by attenuating our proven remedies, and trusting to their dynamic power, by observing the indications of our psychic force, and using it in such ways that the votaries of a pseudo or false science shall not glory in the strength of men who better know where the two ways meet.

APPENDIX.

DISCUSSIONS.

[Third Day's Session.]

D. H. BECKWITH, M.D., Cleveland, O.: I am much gratified, Mr. President, by the evidences of progress during the past four years on the part of this Institute. Four years ago, such an essay as we have just listened to would have subjected the essayist to bad treatment, and his essay would have been scouted at and condemned as a "rejected address." Now, I ask you, gentlemen, that when you come to read this paper of Dr. Swazey's in the *Transactions*, and I hope the Publication Committee will publish it in full, I ask you to compare it with Dr. Wilson's address before the Institute, delivered at Philadelphia, and see whether there is not more of Darwinism, more of infidelity, in the former than in the latter paper. I protest against the doctrines of Dr. Swazey's paper, but I shall certainly vote for its acceptance and reference.

S. R. BECKWITH, M.D., Cincinnati: I am also greatly pleased, and I was never more pleased in my life. The Institute has certainly progressed wonderfully in liberal ideas during the past four years, and now has the moral courage to listen complacently even to doctrines which it does not approve. But I am particularly pleased with the papers of Drs. Frost and Brown, because they treat of a subject in which I take a deep interest, viz., the application of homœopathy to diseases of the mind. Our provings are not very satisfactory so far as they refer to psychological conditions, consisting merely of a series of isolated sensations, being the imaginings and fancies of the provers, which may or may not have been due to the drug taken—most probably not. But we now have an opportunity, in several public and private asylums, of testing the efficacy of homœopathic treatment in this class of diseases, and of verifying or disproving the mental symptoms of our drugs upon a larger and more accurate scale than has ever been done before; and, for my part, I am free to say that, both by analogy and by practical experience, I do not for a moment doubt that our treatment will prove to be in this field, what it has proven to be in so many others, not only mild but beneficent

and abundantly successful. I might report a number of interesting cases, but I will take up your time with a brief recital of but two or three.

One gentleman, who had been confined for over two years in an asylum, and regarded as an incurable, being afflicted with melancholia; was taken from the asylum, placed in a pleasant ward in the institution I have the honor to represent here, had homœopathic treatment, and was dismissed cured.

A lady, aged 68 years, was possessed with the idea that she was to be hung, and whenever she heard the noise of a hammer or saw, she insisted that the scaffold was being made. She was perfectly cured.

Such cases as these are valuable to us, and at our next meeting I have no doubt there will be presented here practical reports on the treatment of the insane in institutions under homœopathic control, that will open our eyes and the eyes of the world to the importance of more vigorously cultivating this great field.

I recognize in its full force the value of Dr. Brown's observations as to the effects of mind upon the cure of mental diseases, and I also recognize the value of homœopathic treatment in the same direction. I believe that functional diseases of the mind can always be cured by homœopathic treatment. But we must be careful that we do not claim too much; that we do not claim to cure cases dependent on organic lesion, and disease of the brain as an organ.

SECTION IX.

REPORT

OF THE

BUREAU OF OPHTHALMOLOGY AND OTOLOGY,

MALCOLM MACFARLAN, M.D., ... Philadelphia.
T. P. WILSON, M.D., ... Cincinnati.
H. C. HOUGHTON, M.D., ... New York.
C. H. VON TAGEN, M.D., ... Cleveland, O.
W. L. BREYFOGLE, M.D., ... Louisville, Ky.
W. H. WOODYATT, M.D., ... Chicago.

TO THE

TWENTY-SEVENTH SESSION

OF THE

American Institute of Homœopathy.

VOLUME I. NUMBER 3.

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VIII.

HARD CATARACT.

By Malcolm Macfarlan, M.D., Philadelphia.

The name cataract is derived from a Greek word, meaning to tumble down. There is obscuration of sight, as if a veil or mist fell before the eyes, the rays of light being intercepted on their way to the retina by what constitutes cataract opacities on the lens or its capsule. The common cause of hard cataract is generally referred to the defective nutrition of old age, and directly traced to morbid alteration of the vitreous, by which the lens ceases to be properly nourished by osmose, resulting in opacities of the cortex and capsule. A slightly opaque capsule reacts to retard the transmission of nourishment within, greatly increasing the obscurity of the cortex. Almost in every eye after middle life minute white or opaque spots are to be found in the fibrillæ at the periphery of the lens, which if increased must result in stellate or hard cataract. In the beginning distant objects appear misty, afterwards those that are near. Sight is usually better at dusk, in a dim light, or under conditions where the pupil is kept well dilated, the cloudiness or opacity being greater at the centre than margin of the lens. In testing for acuteness of vision in the aged, you will find a certain amount of haziness due to changes which take place in every old person; the lens becomes harder or more solid, and changing in color from the clear white of adult life to a yellow or straw color, so that it is not always possible to draw a sharp dividing line between the physiological and pathological states; the difference between hard cataract and

natural changes taking place in the eye of the aged being one of degree only. One eye is usually at the same time more affected than the other, which, however, soon follows, acted on by similar causes, and hastened by sympathy and connection. A cataractous lens is always more or less translucent, all the rays not being intercepted, so that if the retina is good, the eye can distinguish light from darkness, a candle flame, or perhaps count fingers held a foot away. It is absolutely essential to determine before the operation for extraction, that the retina is capable more or less of performing its functions, and that we have not glaucomatous or other conditions to deal with. The retina prevented from performing its uses or shut off from the natural stimulus of light soon begins to lose power, and the eye becomes in a measure amblyopic. The greater the delay before removal, the more marked this incurable condition becomes. The hardness characterized by this variety of cataract, has reference as to hardness to the nucleus alone, differing from other kinds in that respect; it may or may not have a firm cortex, although when the cataract has fully ripened, the cortex thereafter frequently or usually softens. The distinctions to be made are important as indicating the kind of operation to be performed with the greatest chances of safety. When in over-ripe cataract the cortex undergoes disintegration, absorption of its watery elements, consequent chalky degeneration and decrease in size, followed by improvement in sight, we have a condition of the lens resembling the collapse noticed some days after its removal.

Simple inspection to the experienced or ordinary observer is sufficient to make out the diagnosis in cases fully formed, and the iris dilated. In oblique illumination, with a two or three inch convex lens, the size of the nucleus is seen and estimated from the extent of its yellow circle, and its hardness from the depth of color. The cortex is observed to be of a dirty white color and granular appearance; passing through which are lighter-colored centripetal wedge-shaped stripes, composed of opaque spots, the original deposit of which at the periphery marked the commencement of cataract. Direct ophthalmoscopic examination confirms this, and there is inability to distinguish the orange-colored fundus. The progress of cataract is usually

slow, often of uncertain or intermittent rate, but on an average becoming ripe in from one to two years. It is best to wait until vision is practically useless before operating, and then to choose the eye most affected if both are involved. A point destined to be of great practical importance to the homœopath, by furnishing a clue to the treatment of incipient cataract, is, that it has been produced by eating bread containing ergot of rye; experimentally produced in animals fed on a diet consisting largely of sugar. It is also a known sequence of diabetes and ichthyosis.

The success of the operation for extraction depends on the kind of cases chosen, their condition and care; but above all on the skill and experience of the surgeon. In looking over a great many reports, and averaging results where given, I make the failures to be at least twenty per cent. In a yearly report of the New York Eye and Ear Infirmary for 1873, the largest in the country, out of 6596 ophthalmic cases of all kinds presenting themselves, there were in all 33 operations for extraction of cataract, mostly for the senile variety, keratonyxis being employed in 4 cases for congenital, traumatic, secondary, and soft cataracts, and iridotomy in 4 cases. In the yearly report of the Massachusetts Eye and Ear Infirmary, at Boston, there were 68 operations of all kinds for cataract. In the Wills Eye Hospital, of Philadelphia, for the year, there were 36 operations for extraction. There were twelve operations, in 1873, for extraction at the Homœopathic Ophthalmic Hospital, New York City, being a great advance over previous years. At the last session of the Institute, I sent in a detailed report of 36 cases of extraction, running over a period of six years, with name, age, address, and result. The success obtained at the clinics and in the private practice of the prominent oculists in Europe and America (Knapp, of New York) is simply astonishing to the occasional operator. It is the most delicate and brilliant procedure in surgery; requires more drilling, care, and skill in performance than any other; is subject to many conditions, and liable to endless complications and mishaps, all tending to jeopardize the result. The modern methods of extraction devised or modified by Von Græfe, Liebreich, and others, now known to

all, have greatly advanced the ratio of success, and mechanical ophthalmology claims justly to be an exact science.

Any homœopath who speaks from experience, knows that the drug or allopathic treatment, for certain diseased conditions, is in fact positively injurious; that the recovery or improvement of the case in course of time is in spite of it. This fact is the more strongly impressed on my mind after seven years' experience at a large public clinic, where I have prescribed for hundreds of cases of ophthalmia, which for months had been getting worse under drugs and local treatment by caustic collyria, atropin, and scarification, and which were speedily cured by the potentized single remedy. The improvement and cure are more marked in cases known to be similar to the above, which had not been subject to this severe treatment, and received only homœopathic medicine.

IX.

TRAUMATIC CATARACT.

By C. H. Von Tagen, M.D., Cleveland, O.

By the term "traumatic cataract" is meant a cloudiness or opacity of that portion of the refracting media of the eye known as the lens with its capsule, due to mechanical injury of some kind, whether it be a blow or a wound.

Strictly speaking, the capsule itself does not become opaque, but usually takes on a wrinkled appearance and becomes thickened; still it retains its transparency.

According to Müller (vide *Archiv. fur Ophthal.*, vol. iii, No. 1, p. 56), these opacities are not owing to any changes in the structure of the capsule itself, but are situated on its inner surface, and are due to deposits or new layers of a material which in many cases resembles that of the capsule itself in its nature.

Schweigger strongly asserts (*Archiv. fur Ophthal.*, vol. iii, No. 1, p. 137), that capsular cataract only occurs as a complication of an antecedent cataractous condition of the lens.

The reason given for this is that absorption of the fluid constituents takes place in a retrograding cataract, the harder portions becoming adherent to the inner portions of the capsule, and thus produces what appears to be an opacity of the capsule.

A blow with a blunt instrument upon the cornea direct, or one received upon the closed lids, will produce much the same result, *i. e.*, traumatic cataract. In the former instance more active symptoms are likely to supervene. The iris and cornea would,

in all probability, be the first structures to take on inflammatory action, the activity of which will in a measure depend upon the promptness with which the symptoms are met, and likewise upon idiosyncratic influences. A blow of this kind is generally followed by a rupture of the capsule at the periphery, where the thick anterior merges into the thin posterior capsule. In some cases no tear or rupture can be detected anywhere in the capsule. Thus it may be seen that in either case traumatic cataract may follow a blow of the kind referred to, whether there is or is not a rupture of the capsule. In the latter accident, or when the blow is received upon the closed lids, a cataract will in all probability follow sooner or later, without the supervention of any severe or acute symptoms, more than the immediate pain and shock that follows the blow. The cataract will form none the less sure, though more gradual and slow, than in a case in which the blow is received directly upon the cornea, and severe active inflammatory symptoms ensue.

Traumatic cataract the result of a penetrating wound, occurs as follows:

When the capsule is torn or penetrated by a sharp instrument or a foreign body, as for example a fragment of gun-cap, chip of steel, or aught else of the kind, the aqueous humor is brought directly in contact with the lens-substance, which may become very rapidly opaque. A perforation such as would be produced by a fine sewing needle, would lessen the danger, as the margin of the wound in the capsule may unite by "first intention," and no cicatrix or permanent opacity would be likely to follow, but if the wound be larger and a considerable quantity of aqueous humor be admitted, the lens would swell up very rapidly, in which event it would press upon the iris and ciliary body.

The iris is not unfrequently torn and lacerated, and may protrude through the corneal wound, which of course would greatly increase the irritation and danger of severe inflammation.

Another and an additional source of irritation is, that broken portions of lens-substance may exude or become entangled in the wound, which coming in contact with the iris would produce very great irritation. The inflammatory action thus set up may take on a serous or a purulent character. In case of the former

there would be an increase of intraocular tension, with its attendant glaucomatous condition and symptoms.

Accidents of this kind (traumatic) occurring in children are less likely to take on secondary inflammation than in adults, for the reason that the lens is softer, the iris less irritable to pressure, and absorption is more rapid.

It is not improbable, in fact, that in the young the lens may become almost entirely absorbed, there remaining but a very small white disk in its place.

The lens in case of children becomes more rapidly opaque than in adults; in fact a few days have sufficed in some cases after an injury to the lens for it to become almost cataractous. So great is the swelling of the lens at times, in its volume, that it pushes the iris forwards, diminishing the size of the anterior chamber considerably.

The pressure of the lens upon the iris and ciliary body, producing so great irritation, is likely to give rise to severe iridocyclitis.

Should the foreign body become lodged in the lens, or having passed through it, become fixed in the vitreous or some other deepseated structure of the eye, it is almost certain to be followed by most destructive inflammation of the organ sooner or later.

The history of the case should be most carefully inquired into, and if found to be caused by the presence of a piece of steel, shot, etc., its whereabouts should be diligently searched for, and if practicable extracted (in most cases this is out of the question). The eye, however, should be well watched, so that the earliest glaucomatous condition can be detected, and if possible cut short by timely treatment (iridectomy), and not only that, but the danger of sympathetic ophthalmia in the sound eye be averted.

The period embraced within the formation of traumatic cataract will of course vary according to the attending circumstances, such as age, cause, idiosyncrasy, etc. The better to illustrate this point, I will here annex a case or two in point.

CASE 1.—E. D., æt. 23, a resident of Cleveland, strolling out along the banks of the lake on a Sunday afternoon with a companion, who was amusing himself throwing pebble-stones, one

dent, at which time the injured eye presented the following condition: Anterior chamber entirely filled with a blood-clot that had escaped from the wounded iris; the lips of the corneal wound pouted; cornea somewhat bulging outward; intraocular tension very great; conjunctiva very much engorged; severe pains along side of the nose, supraorbital region, temple, and side of the head, extending well over the occiput; vision of course entirely gone from the organ, for return of which there is not the slightest hope.

The same treatment was resorted to in this as in the former, and at the close of the fifth week all the inflammatory symptoms had subsided, and the clot had disappeared by absorption. Some five months later I examined the eye, and could now distinctly locate the cicatrices in the cornea, capsula, and lens, and as the foreign body could not be brought into view by close examination, it is presumable that it lies imbedded in the vitreous, where it may lie dormant until, by its presence, some exciting cause may call forth inflammation that will, in all probability, induce suppurative choroiditis. This case illustrates the importance of arresting the destructive nature of the inflammation, with a view not only to relieve the injured organ, but likewise to save the sound eye from participating in the severe inflammatory process. As a "dernier ressort," after all therapeutical means have failed, enucleation of the eyeball may become necessary.

X.

CONGENITAL CATARACT.

By T. P. Wilson, M.D., Cincinnati, O.

I do not flatter myself that I shall be able to present anything novel or original upon this subject. So far but little attention has been paid to it by ophthalmologists. And we no sooner commence to investigate the subject than we are troubled by a large number of questions that we are wholly unable to answer. Both on account of the rarity of this form of cataract and the infrequency of surgical or other interference with it, there follows naturally that there is but little attention paid it, and but little known concerning it.

The term cataract has now come to be generic, and so expressive of a large variety of pathological states. The degenerations of the crystalline lens are surprisingly varied. That it should be capable of so many different alterations is one of the curiosities of pathology.

In the fœtal state the lens is partially opaque, and its capsule supplied from the arteria centralis by a vessel that crosses from the disk to the posterior pole of the lens. Later there is an obliteration of this nutrient vessel, and then the lens becomes transparent.

We have to bear in mind another fact in relation to the structure of the lens. After boiling or immersing it in alcohol we find it breaking into three triangular segments, which join to inclose a round, hard centre, which we call a nucleus.

We are prepared now to appreciate the nature of a congenital

cataract. It is probably often caused by an arrest of development. Into the cause of this arrest we are not prepared to inquire. But we find at birth the lens has failed to become transparent. And, lying between the triangular segments and the nucleus, there is found to exist an opacity. So that, while the centre and the periphery are clear, we have a central body which, enveloping the nucleus, and of size sufficient to cover the pupil, seriously interferes with vision.

But while this is the characteristic condition of congenital cataract, it is also a fact that we have the same occurring in children during infancy. In such cases we cannot so easily account for its appearance, though we attribute it to malnutrition.

Iritis and a dislocation of the lens are said also to cause this form of cataract. Owing to its form it is also termed lamellar; also zonular cataract.

Owing to the fact that the opaque layer about the nucleus is delicate and thin, it does not largely obstruct vision, and on this account may escape detection for many years. By dilating the pupil with Atropine we can make a very ready diagnosis. We find the peripheral border clear, and the central part clouded, through which the fundus may be seen in dim outline. We may also find the clouded portion striped or spotted. If the cortical part is perfectly clear, the disease is generally considered stationary, but if it is also clouded, diffusely or in spots or streaks, then we may consider the disease progressing.

An examination is best made by oblique illumination. This brings the transparent peripheral part into sharp contrast with the central clouded zone.

The diagnosis is comparatively easy in cases where the cataractous condition is stationary, but less easy when the cortical part becomes invaded, and the lens is progressing toward a total soft condition. Still, as Stellwag has carefully pointed out, there are certain well-defined appearances that mark this degenerating process in all its stages, and distinguish it from other metamorphoses of the lens.

A malformation of the eyeball is not uncommon in connection with lamellar cataract when congenital. Myopia, microphthal-

mia, as well as organic changes in the retina, are among such conditions.

A question of interest arising here, is the possible hereditary tendency of the disease. We are assured of the fact, that parents without cataract sometimes have children, several of whom have congenital cataract, or at most cataract occurring early in life.

It would be well if the most careful investigations could be instituted into the antenatal influences that bring about such destructive results, and to what extent the child is liable to such an affection, existing in either parent at time of conception.

And differing so essentially in many particulars from ordinary cataract, it would be a point of interest to determine whether, under the action of some specific remedy, the lens might not be made to progress toward final recovery; a course quite as compatible with nature, for aught we can see, as the ordinary retrograde course which the parts are apt to pursue.

XI.

CATARRHAL INFLAMMATION OF THE MIDDLE EAR.

By Henry C. Houghton, M.D., New York.

This, like all other catarrhal inflammations, consists in simple vascular congestion, marked by increased secretion, thick spongy condition of tissues, and a rapid genesis of epithelial cells.

Many persons are predisposed to this form of disease on account of free action of the glands of the skin, as a close relation exists between skin and mucous membranes; also between the liver with the portal circulation and mucous membranes. The various forms are usually extensions of a catarrh of the naso-pharyngeal mucous membrane along the Eustachian tubes, the primary disease being caused by "cold in the head," exposure to wet, inhalation of foul gases, etc. The membrane of persons who have been the subjects of measles, scarlet fever, bronchitis, etc., is specially liable to invasion.

The nomenclature of this class of diseases, as well as that of the eye, needs more careful attention at the hands of our homœopathic book-makers. The terms outer and inner, external and internal, are loosely used; the internal or inner ear is not the cavity of the middle ear, as some of our standard works would make it appear, nor is the external or outer merely that part seen by unaided vision.

I would suggest the following for our consideration and guidance to-day, as we speak of the middle ear.

1. Acute catarrh of the middle ear.

2. Subacute catarrh of the middle ear.

3. Chronic catarrh of the middle ear.

4. Non-suppurative inflammation (simple, proliferous) of the middle ear.

5. Acute suppurative inflammation of the middle ear.

6. Chronic suppurative inflammation of the middle ear.

Acute catarrh of the middle ear is one of the most frequent forms of aural disease. The attack is usually sudden, characterized by intense pain deep in the ear, fulness, and noises of various type. Examination of the ear reveals increased vascularity of the membrane, which is forced outward, more or less according to the accumulation within. Hearing for voice and watch diminished. Associated with these local symptoms, general fever, and the usual evidences of catarrh of Eustachian tubes and pharynx.

Two cases will illustrate, at the same time, the history, symptoms, and treatment.

(1.) John H. E., age 25, coachman, March 5th, 1872. Yesterday out driving; cool, windy day. At 4 A.M. woke with severe pain deep in the left; high pulse, great thirst, restless. Hears watch $\frac{1}{40}$ normal distance; membrana tympani bulging and red over entire extent. Seen in room at his employers, and received Bell.^{200} in water every half-hour.

March 6th. No pain; came to office; hears right $\frac{1}{2}$, left contact; membrana tympani depressed, pale red. Pol. +, then hears right $\frac{1}{2}$, left $\frac{1}{48}$; membrana tympani throws forward. Second use of Pol. +, then left $\frac{1}{40}$. Merc.^{200}.

March 7th. Pain nearly all night; chilly, restless; hears left. Politzer—, Val.—, Cath.—, Bell.^{30}, Bell.^{1}, in warm water locally. Evening, pain all day, no change in appearance; the membrana tympani red and bulging. Made incision in posterior inferior quadrant, and thus relieved the pressure in cavity of the tympanum; pain ceased in an hour afterward. Bell., Merc.

March 8th. No pain since. Pol. +. Hears before $\frac{1}{240}$, after Pol. $\frac{5}{240}$. Bell. or Merc.

March 9th. Only occasional stitches; membrana tympani still red and contracted. Hears $\frac{10}{240}$; Pol. +, then $\frac{17}{240}$; membrana tympani comes forward fully by inflation. Merc.^{200}.

March 11th. Membrana tympani clearer, congested, especially along manubrium; bulges posteriorly by Val. Hears $\frac{15}{240}$; Pol. +, then $\frac{28}{240}$, and membrana tympani reddens over whole surface. Merc. v.^{200}.

As there was no relapse, the patient did not return for treatment. Some weeks later, on coming to my office with a message, I had the opportunity to examine, and found the hearing normal, and no trace of incision or inflammation.

(2.) Henry R. McH., age 21, banker, July 16th, 1872. While bathing, on the 14th, had slight pain in left; next morning wakened from sleep by the pain, which has continued without intermission; a dull, deep pain; is thirsty, with free perspiration, but no relief by perspiration. Hears right normally, left $\frac{18}{240}$; right membrana tympani clear and movable, but slight congestion along manubrium; left membrana tympani very red above and along manubrium. Pol. +, then pain relieved, and the membranes were free from vascularity. Merc. v.^{200}.

Evening. Pain worse; Merc. v.^{200} in water, and warm water instilled. July 17th. Hears only $\frac{8}{240}$; Pol. +, then $\frac{7}{240}$. During the night the pain was severe; towards morning, less; membrana tympani bulged above; at manubrium held as if by adhesion. From this date to the 27th there was no return of pain, and daily gain by the use of Politzer's method, the hearing on the 27th being $\frac{87}{240}$; the membrane clear. September 6th. Membrane normal; hearing $\frac{2}{3}$ for watch; voice well as ever.

These cases are much more frequent in the child than adult, often unrecognized till gums having been lanced and bowels injected all to no effect; spontaneous perforation of the membrane gives relief, and all goes seemingly well for a time; later years show that neglected earaches and adherent membrana have close relations.

From review of records, both clinical and private, I find Belladonna and Mercurius have been most used with my adult patients; Puls. and Cham. more with children; still, Merc. very often with children. Gels. also is very valuable; an analogue of Bell. yet unlike. I must here call attention to the use of the term otalgia, so frequently employed; otitis is very frequent,

otalgia very rare, being disease of nerve-trunks, usually of the seventh or fifth.

Subacute catarrh is one variety not much discussed in any treatise except Professor Rivers's last work, yet it is much more common than physicians are aware. The heedlessness or apparent stupidity of children may be due to this trouble. The symptoms are much the same as the acute form, except the pain; in fact, I believe it often precedes the acute form, it may be for months, and, of course, an acute catarrh may pass into this variety as it resolves or becomes chronic.

The following case illustrates. Wm. H. H., age 30, had nasopharyngeal catarrh for a long time. September 12th, 1871. For more than a week has been losing power of left; the usual homœopathic remedies gave no relief. Sent to me. Hears right normally, left —; right membrana tympani normal, left membrana tympani normal; pearly gray hue gone; the entire surface pinkish; ossicula prominent, deep folds, anterior and posterior. Pol. +. Hears $\frac{1}{24}$ normal distance for watch; membrana tympani forward, and covered over entire extent by rings formed from edges of air-bubbles in the mucus collected in the tympanum. A second and third inflation caused change in location of bubbles, and the hearing rose $\frac{2}{10}$ normal distance. Patient free from pain; has sense of fulness, and sound as of bubbles bursting in ear. These successive treatments cleared the cavity and gave perfect audition. The remedies I have found valuable are Cotyledon umb. (see Hale's third edition), Sanguinaria can., Gelsem., Glanderin, and Nux vom.

We come now to chronic catarrhal inflammation. Until lately, every form of inflammation that was not suppurative was classed as catarrhal; but Von Trölsch, in his admirable work published twelve years since, separated a certain class (so-called "dry catarrh") under the term sclerosis. As this matter is one to be made more clear by advance in pathologieal investigation, I will give the objective and subjective symptoms of the two forms of non-suppurative inflammation as quoted from Roosa: Catarrhal and Proliferous:

Subjective Symptoms of Catarrhal Form.

History of catarrh. Catarrhal diathesis. Not insidious in its approach. Is aware of excessive secretion. Sore throat. Clicking in ears. Tinnitus aurium. Sense of fulness, of something in meatus externus. Vertigo.

Subjective Symptoms of Proliferous Form.

No history of catarrh. Insidious approach. No sore throat. No excess of mucus. Tinnitus excessive and more continuous.

Objective Symptoms of Catarrhal Inflammation.

1. Impairment of hearing.
2. Changes in membrana tympani.
3. Imperfect action of Eustachian tube, and changes in its structure.
4. Naso-pharyngeal inflammation.

Objective Symptoms of Proliferous Inflammation.

These are the same as the above, if we omit the fourth, naso-pharyngeal inflammation.

It will be noticed that there is a much more marked contrast between the two forms as regards the subjective rather than the objective symptoms. When we come to consider the pathology, we shall see that in the proliferous form the changes are much greater than in the catarrhal.

In the catalogue of his museum, Professor Joseph Toynbee has given the appearances of the cavity of the tympanum, and to his writings and labors we are indebted for material that has been used and increased by German and English students. The pathological appearances in the catarrhal form are:

1. Collections of mucus distending the cavity of the tympanum.
2. Thickened mucous membrane.
3. Collections of lymph.

In the proliferous form they are:

1. Connective-tissue formation.

2. Mucous membrane of tube covered by dense fibrous tissue.

3. Hypertrophy of the bony walls of the tube.

4. Obstruction of the tube and cavity cysts by dense fibrous tissue.

5. The stapes completely and firmly anchylosed to the margin of the fenestra walls.

6. An exostosis on the inner surface of the neck of the malleus.

7. Malleus and incus anchylosed together.

8. Firm bands of adhesion in the mastoid cells.

9. False membrane on the tendon of the tensor tympani muscle.

10. Partial obliteration of the cavity of the tympanum from adhesions of the membrana tympani to the labyrinthine wall.

11. Hyperostosis of the petrous bone, and anchylosis of both stapes.

12. Atrophy and fatty degeneration of the tensor tympani muscle.

It would require more time than can be allowed to this subject to discuss the views of various authors, and much remains to be made clear by study; hence I turn to the practical matter. Can these conditions be corrected? The chronic catarrhal form yields readily in its early history, and at times even when of long standing. Iodine, Mercurius, and Sulphur are standard remedies, also those mentioned under subacute catarrh; these, with the use of Politzer's method of inflation or the Eustachian catheter, make brilliant and permanent cures.

The treatment of the second form of non-suppurative inflammation—the proliferous, so-called—has been and still is the difficult problem. Previous to the last year my dependence has been upon inflation and the remedies as indicated by subjective symptoms principally. In some cases very satisfactory results were reached, but most remained unimproved. During the past year I have used the galvanic current, in conjunction with internal remedies and inflation. At the semi-annual meeting of our State Society, I stated my hopes with regard to this agent; four months of added experience confirm them, and assure me of the great value attaching to it.

Of thirty-four cases treated by the galvanic current, eleven were not benefited, seven were improved, thirteen were much improved (still under treatment), and three were cured. This is not the time to speak of the therapeutical sphere of galvanism, value of positive and negative currents, and of physiological phenomena connected with the exhibition of this great force; but I believe our Materia Medica presents no agent so worthy of careful experimental study as this. Its action upon the bands, and so-called hyperplastic products, is to produce absorption, and thus restore the conducting apparatus to somewhat of its original mobility. The method of application is simply to cleanse the posterior nares and pharynx by injection of a saline solution, then adjust the electrode connected with the positive pole of the battery in the meatus externus, the negative being in the hand; a sense of warmth or pricking follows, which is sufficient; no pain should be produced. Politzer's method should be used immediately after to put the adhesive bands on tension, and often the result is at once noticed by the subject himself. A brief history of each of the three cases cured is here given:

(1.) Mr. C. W., age 20. October 2d, 1873. Deaf eleven years; cause unknown; gradual loss; humming noise; no special throat trouble. Hears right and left less than $\frac{1}{20}$. Both membrana tympani retracted and immovable. Received Kali hyd.^{3} and daily applications of galvanic current, to the 21st of October. Hearing $\frac{10}{20}$, and membranes movable. Nov. 10th, 12th, treated, then $\frac{13}{20}$. Not seen till Jan. 5th, 1874. Hearing does not fail. Hears $\frac{14}{20}$, after treatment $\frac{16}{20}$, and has no further occasion for treatment.

(2.) Miss K., age 40. June 17th, 1873. Came for removal of cerumen right. Found that left was faulty. Hears $\frac{1}{20}$. Membrana tympani retracted and dull. E. T. dil., but no permanent tonicity from inflation. Four applications. Hears $\frac{18}{20}$. Jan. 9th, 1874, $\frac{10}{20}$. Treated semi-weekly, then weekly, till Feb. 28th. Hears $\frac{19}{20}$. March 23d. No relapse. May 29th. No relapse.

(3.) Mrs. M., age 36. March 5th, 1874. For lifetime (?), ten years, had trouble with left. Hears $\frac{1}{40}$. Membrana tympani retracted and malleus immovable. Received daily treatment till March 30th. Hearing $\frac{17}{40}$. A relapse followed. April 6th.

Hearing $\frac{2}{2}\frac{1}{4}\frac{5}{0}$. Merc. viv. given in place of Kali hyd. April 30th. Hearing $\frac{2}{2}\frac{5}{4}\frac{0}{0}$. During the month of May she gained rapidly, and on the 15th heard $\frac{8}{2}\frac{0}{0}$. Sensitive to cold air, with occasional shooting pains. Silicea[30]. After inflation Siegle's speculum was used, and gradually the membrana tympani was released, first posteriorly then anteriorly. June 1st. Hearing $\frac{2}{2}\frac{0}{0}$.

In atrophy of the tensor tympani muscle, the faradic current may be of value after the galvanic. At the annual meeting of the New York State Society, Dr. J. F. Gray made some remarks on Dr. Searle's paper, "Spasm of the Tensor Tympani Muscle," and said he could cause objective noises in the ear, and I had the pleasure of calling on our venerable friend and observing it for myself. This led me to look to tinnitus as caused by this lesion. Dr. Hamilton mentions such a case in his *Surgery*. And from the fact that the tensor tympani has a double supply, one from otic ganglion (sympathetic), one from internal pterygoid, a branch of the third division of the trifacial, I have used a reverse current from these two points, first galvanic and later induced, with an excellent result in a number of cases; one, a lady, heard 3 in left relaxed membrane, one year's duration, now hears 10 feet under this method.

XII.

THE ABUSES OF POLITZER'S METHOD IN THE TREATMENT OF CATARRHAL INFLAMMATION OF THE MIDDLE EAR.

By William N. Guernsey, M.D., New York.

Mention need not be made upon this occasion of the vast contributions of Dr. Politzer of Vienna, to the fuller development of the knowledge of aural diseases, nor further encomiums be bestowed upon him for his important contributions to aural therapeutics in the discovery of a method of treatment which bears his name. It may be justly said, that the introduction of the Politzer method of inflating the middle ear has marked an era in aural diseases, as it has conferred upon the physician an invaluable agent for the proper treatment of certain forms of deafness.

The majority of aural diseases are catarrhal in nature, and owing to the peculiar anatomical arrangement of the middle ear generally require local treatment. The products of the catarrhal inflammation must be dispersed or absorbed, and the resulting thickening of the mucous membrane, and the adhesions and contractions need to be removed before complete recovery can occur. The most important therapeutic agent in these conditions is the inflation of the middle ear with air, and since the introduction of Politzer's method is almost universally employed.

It is patent to every one, and does not require further allusion here, that in the treatment of nearly all the chronic forms of deafness, and in many of the acute cases, the inflation of the

middle ear with air is indispensable. But in its employment, the important question arises, shall it be done by means of the catheter, or by Politzer's method. If both are equally potent in their curative action, the latter certainly is to be preferred, as being less disagreeable to the patient, for the facility with which it can be used with children, and the great ease with which it can be performed. The introduction of the Eustachian catheter requires a delicate touch, which is only acquired after long experience, while Politzer's method can be used by any person of ordinary intelligence.

The brilliant results which are often instantaneously produced by the simple inflation of the middle ear, and its easy performance by Politzer's method, has led to a rash and indiscriminate use of one of the most valuable curative means within the physician's grasp. Simple, and apparently devoid of all harm, its improper application may be attended with injurious consequences. These may arise,

1st. From a too early use of it in the inflammatory stages.

2d. From too frequent and prolonged applications.

3d. From forcible inflation of the middle ear causing rupture of the membrana tympani; and

4th. From its application in certain forms of chronic catarrhs.

The first objection is equally applicable to the use of the Eustachian catheter, and therefore need not receive further allusion.

The second is well worthy of mention, as the majority of aural cases are of a chronic nature, and require treatment for an extended period of time. In our changeable climate, catarrh usually needs several weeks of careful attention to procure any marked alleviation, and in the hope that a complete cure may be attained, the ear may be inflated too frequently, and for such prolonged time that the membrana tympani may lose its proper elasticity, and become flaccid.

The third barely deserves passing notice, as the rupture of the membrana tympani from this cause is of rare occurrence, and when happening, usually heals quickly.

The fourth contraindication is of most importance, and the one to which I desire to draw your attention in this paper.

It is doubtless well known to every one conversant with aural diseases that, in chronic catarrhal inflammation of the middle ear, the hearing is occasionally deteriorated upon inflation with air by Politzer's method. It has probably been commonly observed that some cases of tinnitus aurium are much aggravated by its use, and that frequently an unpleasant fulness in the ear results. Also, that often the middle ear cannot be inflated by Politzer's method, although there be no evidences of exudation, and the Eustachian tube is permeable for the bougie. Further, that in all these cases, when the middle ear is inflated by air gently forced through a small Eustachian catheter, the symptoms are generally alleviated.

This aggravation of the hearing by the use of the Politzer's method occurs in those cases where there are no accumulations of serum, mucus, or pus, which may be dislodged and thrown against the drum-head, and thus cause a temporary diminution of the hearing, but is present in that variety of aural diseases recently called proliferous catarrhal inflammation or sclerosis. According to elaborate investigations recently made by Weber-Liel, of Berlin, the muscles of the throat and ear undergo fatty degeneration, and become atrophied in this affection. The elastic contractile power of the muscles becomes impaired, and the Eustachian tube collapses, and the use of Politzer's method does not produce sufficient irritation to excite contraction of those muscles which open the canal. Or, if the air does permeate into the middle ear, any surplus of it cannot escape, as the Eustachian tube is collapsed, and the membrana tympani is not capable of making corresponding extension, consequently pressure is exerted upon the fenestral membranes, and the symptoms of intra-labyrinthal pressure, fulness, and tinnitus aurium are aggravated.

In this class of cases, the use of Politzer's method should be dispensed with, but the ear should be inflated through a small Eustachian catheter. Electricity and stimulating applications to the orifice of the Eustachian tube, and within the tympanic cavity, are indicated, as by arousing the nutrition of the parts, and by developing the muscles of the organ, great amelioration of all the symptoms of the disease is obtained.

XIII.

RETINITIS FROM BRIGHT'S DISEASE.

By T. P. Wilson, M.D., Cincinnati, O.

Although a disease of comparatively recent discovery, Bright's affection of the kidney is now well understood by most practitioners of medicine. Still it is not hard to find those who make important pretensions, quite ignorant of the essential facts of this disease. It is not long since I saw a medical gentleman boiling urine, and when by this proceeding he produced a copious precipitate, he immediately decided the case as one of albuminuria. He had evidently only half learned his lesson.

Another physician recently looking at some urine, in which was a copious mucous deposit quite visible to the eye, said that it was undoubtedly albumen. Of course what he could see we could not dispute.

And still another one, looking at a sample of urine only the other day, said it had no albumen in it, because it was so thin.

Such parties, ignorant of the nature of this disease and its simple and well-known tests, would hardly take any interest in other tests, to employ which we have to make much more laborious preparation. But fortunately the results are correspondingly much more pleasing and satisfactory. And to the profession at large the subject in any of its aspects cannot fail to be a source of interest.

There need be no antagonism between the specialist and the general practitioner. Both are working to a common end. And we cannot but rejoice at the fact, that while they work in differ-

ent ways and by different agencies, they are to each as complemental parts of a whole. The one discovers and the other confirms. And in many instances that which by the one might be vaguely guessed, is made certain by the timely supporting evidence of the other.

The inventor of the ophthalmoscope could never have dreamed of the wide range of usefulness his little instrument was destined to obtain. And we do not hesitate to say, that it has by no means reached the full limit of its power. We are almost daily adding to its success in revealing that which seemed hopelessly hidden from sight.

A peculiar form of retinitis is now quite frequently recognized as concomitant of Bright's disease of the kidney. Nothing is better known than the insidious character of this disease. The case I shall give in illustration at the close of this article is only one of many just like it, and which falling into the hands of those not properly informed, are not only not understood, but mistaken for quite another disease. The secondary affection of the eye, or the brain, or the heart mislead those ignorant of its pathology, and these are assumed to be the true lesions.

There is nothing especially new in the fact that we have in albuminuria a concomitant affection of the sight. Bright, who first investigated the disease as related to the kidney, states that out of thirty-seven cases four had this complication. Frerichs says six in forty-seven. Lebert found one in five. But these observations made before the ophthalmoscope was used are not of special value. We are sure a much larger per cent. exists, though we are not in possession of reliable statistics.

It is possible for the nephritic lesion to exist a long time without any modification of sight. But this may declare itself at the outset. And it now happens not infrequently that the ophthalmoscopist is the first to detect the real nature of the malady.

The appearances of the fundus oculi in nephritic retinitis are so thoroughly marked and characteristic, that we many times need go no further in our investigations after we have once brought the fundus under focus.

The ophthalmoscopic appearances are considerably varied. In the incipient stage of congestion we may be somewhat in doubt

as to its real nature. We find the veins of the retina enlarged and engorged, the arteries decreased in size. The optic disk is distinctly hyperæmic, often considerably swollen.

Soon after exudation occurs, and then we have the characteristic changes in the fundus. Infiltration hides the disk more or less completely. This, with the bloodvessels seen covered with a delicate down, some writers say wool, or designate the appearance as woolly, but the comparison is quite too coarse. Blood extravasations now appear quite numerously upon or into the retinal layer.

But the chief objects of interest are the numerous white spots that now make their appearance. Like delicate snow-flakes they occur scattered over the fundus, and increasing in size, coalesce, forming about the disk a broad white mound, clearly separated from the margin of the disk.

In other parts they form irregular patches, and in the case I have to relate they were in parallel bands.

A variety of other appearances are noted by Stellwag, Wells, and others.

The milk-white spots with hemorrhagic points are, however, the positive diagnostic symptoms.

I place before you several views of eyes thus affected. So far are these from exaggerating, they do not represent as striking appearances as I have met under the ophthalmoscope.

A brief statement of the pathological anatomy is this: We have first the venous congestion of the retina. How far the choroidal vessels are involved I do not presume to know. Following the congestion we have exudation and infiltration of the tissues. Degeneration of the bloodvessels occur, and so we have rupture and hemorrhage, hypertrophy and fatty degeneration of the retinal connective tissue, speedily followed with atrophy of the retinal nerve element and optic nerve.

Our prognosis must always be unfavorable. There may be at times considerable improvement in the sight, but it is likely to be only temporary. Unless the patient dies too soon, the sight will eventually be wholly lost.

The treatment is a question not without importance, though in the present state of our art it may seem quite hopeless. Only

a very small portion of the many and various symptoms that go to make up the full picture of this disease pertain to the eye. And taking the *tout ensemble* of the affection, we can safely say there is little reason in the severe measures that are adopted by our old school and eclectic brethren. When our remedies come to be proven, as has already been suggested in connection with ophthalmoscopic observation, we may perchance find the specific drugs that will more effectually reach the disease.

I desire to call your attention, by way of concluding, to the following case, as related by Dr. E. V. Van Norman of Springfield. The Doctor writes:

"Mr. Farrington, aged 23, came to see me regarding his sight, which he had partly and suddenly lost in the following manner. Six weeks before, while out hunting, and being in his usual good health, he found he could not sight his rifle with either eye. Thinking it the effect of using tobacco, he abstained from its use, but he rapidly grew worse. His sight perceptibly failed from day to day, until he was nearly blind, and yet his general health remained unimpaired. He then came to consult me about the condition of his eyes. I found the fundus very plainly marked with characteristic white and red spots. At my solicitation, he went with me to Cincinnati, and presented himself at Prof. Wilson's clinic. The case was described before the class, the urine tested, and the disease pronounced Bright's disease. He was then but slightly dropsical, and complained only of great nausea. He was advised to return home. Three days after I received a telegram to visit him immediately, which I did, and found him semi-conscious, passing no urine, and suffering great pain in the head. The following day he was delirious, urine still suppressed, and in great agony. He sank rapidly for two days more, and died after repeated severe spasms. Up to the time of his presentation at the clinic he was not conscious of sickness, except the nausea and blindness. He had been examined by several physicians, but they had not suspected the true nature of the disease."

XIV.

SECONDARY GLAUCOMA FROM RIBBON-SHAPED OPACITIES OF THE CORNEA.

By George S. Norton, M.D., New York.

Von Græfe, in his elaborate paper on the pathology and treatment of glaucoma (*Archiv. f. Ophth.*, xv, 3, p. 108, translated into English by Thomas Windsor, in the *Royal London Ophthalmic Hospital Reports*, vol. 7, part 1), mentions this peculiar disease of the cornea as being sometimes the cause of glaucoma, although he in his vast experience had operated on only eleven eyes so troubled. In no other work do I find any mention made of this rare disease, therefore my excuse for reporting the following case.

But first let us look at the disease, as described by Von Græfe, in the English translation above mentioned.

"The patient does not generally notice the very commencement of the disease, nor does he consult a medical man till there is a little dazzling or impairment of vision. There is then found some photophobia, and a peculiar dulness of both the inner and outer side of the cornea; the opacity extends from the periphery towards, though it does not reach the centre;* were the upper

* The opacity is sometimes very great on one side at a period when it is hardly noticeable on the other. Its upper and lower edges are occasionally not quite parallel, but converge slightly towards the centre of the cornea, yet even then the edges of the opposite opacity tolerably correspond, so that ultimately the transverse bands formed by the complete opacity would converge a little towards the nose or temple.

and lower edges prolonged forwards, they would include a transverse, ribbon-shaped space. Its color is usually gray, with a shade of yellow or brown; it is most intense towards the margin of the cornea, somewhat less towards the upper and lower edges of the opacity, least towards the centre of the cornea when it gradually fades away; it is peculiarly dull, and hides, to an unusual degree, the iris. The epithelial surface is for the most part smooth; the magnifying glass shows that the opacity is composed of innumerable delicate grayish points. During this first stage the progress is extremely slow, many months being required to cause any perceptible difference; the disease may occasionally be quite stationary. And yet the two opacities very gradually approach one another, so that the resemblance to the form of a ribbon steadily increases.

"The most striking peculiarity besides the form is the extreme loss of transparency; the color is a dirty grayish-white, or inclining to a yellowish-brown; the surface remains generally smooth. The whole appearance excites the suspicion of an inorganic deposit; I have in former days, many times erroneously imagined that an ointment containing some metallic salt had been used. The disease appears to always affect both eyes, though in an unequal degree, and not at the same time.

"Now, it is quite certain that before or at this time, the disease is totally *free from any complication.* The pupils react perfectly to light, and can be readily dilated by Atropine. The vision is exactly proportional to the optical condition; it is improved by proper shading the stenopaic slit, or by Atropine and stenopaic convex glasses, to a greater degree than in older infiltrations of equal extent, owing to the exact circumscription of the opacity, and the absence of irregular astigmatism from any abnormal curvature. The ophthalmoscope shows that the media, internal membranes, and optic disk are perfectly normal. The most careful palpation can discover no trace of increase or suspicious variation of the tension. In addition to the opacity, there is only a greater tendency to pericorneal injection, and to lachrymation when the eyes are exposed to the light, states clearly due to the corneal irritation and the dazzling from the

diffusion of light by the opacity. To repeat, there is in this stage *disease of the cornea* alone.

"After a time there are certain changes; occasionally the tension increases, the pupils becomes sluggish and somewhat dilated, and the disk excavated, as in glaucoma simplex; more often the iris becomes discolored, no dilatation can be produced by Atropine, the aqueous is periodically clouded, posterior adhesions are formed in a most insidious manner, though with some increase of the vascular irritability of the affected eye; very soon they not only correspond to the sphincter, but to the whole of the posterior surface of the iris. In company with this chronic iritis the tension increases, and all the symptoms of secondary glaucoma make their appearance. Sometimes the anterior chamber is shallower, sometimes it keeps its normal depth, probably owing to the increase of pressure being equal to that in the vitreous space.

"Whether the iritis intervenes pathogenetically between the corneal disease and the glaucoma, or whether both are due directly to the corneal affection, cannot be decided. The second alternation cannot of course be rejected, because, as already mentioned, glaucoma arises in certain cases without the intervention of iritis.

"The only change in the cornea during this later period is caused by the appearance of many intensely white perfectly opaque spots. They somewhat resemble lead deposits, still more the calcifications in irido-cyclitis, with which their structure appears to be identical so far as there has been an opportunity for microscopical examination. Any further changes in the eye are simply those of secondary glaucoma, and require no detailed description."

He also says that he has found great and permanent benefit from iridectomy, not only in respect to the tension, but also in preventing the spread of the corneal disease.

Delia Johnson, aged 48, colored, came to me at the New York Ophthalmic Hospital, on November 5th, 1873, with the following brief history:

For ten or twelve years has been troubled with a cough which has developed into well-marked tuberculosis; also suffered from

severe frontal headaches for some time before the dimness in vision appeared. Three years ago noticed a "black cloud" coming before her right eye, which steadily increased in thickness, and was accompanied with some dread of light and general feeling of weakness of the eye. She now applied to a physician for relief, who gave her a wash to be used in the eyes three times a day, soon after which she noticed the sight failing in the left eye. Both have continued growing worse from that time to this, till now right vision equals $\frac{2}{200}$; left vision equals $\frac{16}{200}$.

Examination of the right eye shows a dense whitish-gray opacity extending directly across the cornea (corresponding to that portion of the cornea which is exposed when the eye is half closed), and thus completely covering the pupil. It was about $1\frac{1}{2}'''$ in width, thicker in the centre, and gradually faded away into the clear tissue. Surface of the cornea perfectly smooth. Both above and below the opacity the cornea was perfectly clear, so that the pupils could be seen by directing the patient to look either upwards or downwards. Pupil was contracted and firmly bound down by adhesions. Lens was dim and appeared to have been partially absorbed. Ciliary vessels were injected, and conjunctiva irritable. Tension + 1.

On the left eye the same opacity was to be seen as on the right. But the pupil, instead of being contracted, as in the right, was dilated, which accounts for the greater degree of vision. Iris was tremulous and less absorbed. Tension + 1.

On November 11th admitted her into the hospital, and made an iridectomy upwards on the right eye; no anæsthetic was administered. The wound healed very nicely, and she made a rapid recovery, so that she left the hospital on November 19th with the vision in that eye $\frac{15}{200}$. This continued to improve, and on December 8th was $\frac{20}{200}$. Tension still a little increased. Was now able to see the fundus with the ophthalmoscope, when the optic nerve was found atrophied and excavated; also some portions of the choroid were atrophied, showing that the inflammatory process had not been confined to the iris and ciliary body alone, but had involved the whole uveal tract.

The left eye remained about the same, if anything growing worse, as it appeared to her.

January 15th, 1874, again received her into the hospital and made an iridectomy upwards on the left eye. As the lens was entirely absorbed, the vitreous lay in contact with the aqueous humor, separated only by a very thin hyaloid membrane, so that after I had made my incision into the anterior chamber the "vis a tergo" was so great as to cause a rupture of the hyaloid and escape of vitreous. The iris forceps were then immediately introduced, the iris drawn out and excised. Bandage applied, put to bed, and Rhus administered.

The wound healed without difficulty, and in a week she was allowed to go home. Left vision equals $\frac{20}{200}$.

January 31st. Right vision equals $\frac{20}{100}$; left vision equals $\frac{20}{200}$. Complains of a dark spot floating before the eye. ℞. Lyco.^{200}.

March 12th. The black cloud has grown less as it appears to her, but the vision remains about the same, varying from one day to another. ℞. Lyco.^{200}.

Remarks.—This case had advanced so far, causing such serious changes in the fundus, that a perfect restoration of vision was out of the question. The object of the iridectomy was twofold: first, to diminish the tension, and so stop the progress of the glaucomatous symptoms, also hoping it would exercise a beneficial influence over the corneal trouble.

Both of these, I think, were accomplished, for up to this date, May 20th, there has been no increase in the corneal opacity that I can discern, and the tension remains about normal, if anything a little + in the right eye.

The second object in excising the iris was to give a new pupil opposite a clear portion of the cornea, which was especially successful in the right eye when the vision improved from $\frac{2}{200}$ to $\frac{20}{100}$.

In Von Græfe's description of this disease the corneal opacity commenced at the periphery, where it was most dense, and gradually extended towards the centre. In the above case the opacity was much more extensive and thicker at the centre, and seemed to shade off towards the periphery, although it extended to the margin of the cornea, both outwards and inwards, which was probably due to the advanced stage of the disease.

In all other respects the case corresponds exactly to those described by the illustrious Von Græfe.

XV.

THE PHYSIOLOGICAL ACTION OF IRIDECTOMY IN GLAUCOMA.

By S. J. Bumstead, M.D., Pekin, Ill.

Since Von Græfe originated this justly celebrated method of cure for glaucoma, speculation and experimentation have gone hand in hand in the endeavor to solve the riddle: how a wound in the sclerotic coat of the eye, and the removal of a section of the iris, could produce such a wonderful effect. Many theories have been entertained as to the direct cause of the great increase of intraocular pressure in glaucoma, and consequently of its removal and relief. It has been thought that the ciliary muscle by its contraction increased this pressure, and in the operation the tendon being cut for at least one-fifth of its circumference, that consequently the disuse of this part of the muscle restored the equilibrium between the intravascular and intraocular pressure. "But although," as Stellwag says, "some American oculists have even considered the operation of myotomy about as effectual in this disease as that of iridectomy, it is very difficult to believe, first, that the ciliary muscle is, in this operation, cut to any extent; secondly, that the action of this muscle could exert force enough by its contractions, to produce and maintain such a pressure on the vitreous body by its traction on the choroid coat, when it is well known that considerable external pressure upon the eyeball is necessary to overcome the intravascular pressure, and diminish the calibre of the vessels; thirdly, to make this condition appear probable, one must suppose a partial action of the

ciliary muscle, excluding the circular fibres which compress the edge of the lens, as the rapidly increasing presbyopia always present and which could hardly occur with ciliary spasm, to say nothing of the generally dilated pupil, makes it almost impossible. If any general benefit, therefore, has arisen in this disease from the so-called operation of myotomy, we must attribute it rather to the cut in the sclerotic." The other, and at the present time most generally accepted view of the action of this operation upon the glaucomatous process, is that of the cut in the sclerotic, which, it is said, always heals by the intervention of connective tissue, which, being elastic and yielding, permits of extension enough to restore the equilibrium and the ready egress of the venous blood. But as even Von Græfe himself was unsatisfied with this explanation, it has not been very strictly adhered to by others, unless for want of something better, and therefore the whole question may yet be considered an open one.

Within the last year or two investigations upon this point have been made by Dr. Sigismund Exner, of Vienna, who is the assistant of Professor Brücke, the physiologist, whose views are so novel and interesting, I thought an account of them could not fail to be of interest, and especially to those paying particular attention to the ophthalmological branch of medical science. His paper was published in the *Medizinische Jahrbücher*, a quarterly published in Vienna. Dr. Exner is convinced that the whole secret lies in the changes in the relations of the blood-vessels of the iris and choroid coat, and that by this means the decrease in intraocular pressure is produced. Donders has already shown that very important relations exist between the intraocular pressure and the pressure upon the walls of the vessels within the bulbus. We are, therefore, justified in maintaining that the pressure upon the walls of the vena centralis retinæ, and the other veins where they leave the bulbus, is about equal to the intraocular pressure, and changes with that of the latter. Further, when the difference between the intraocular and intravascular pressure exceeds a certain degree, a rise or fall of the former must be the consequence. By the experiments of Adamück and Wegner it was shown that, notwithstanding the increase in calibre of the vessels after cutting the sympathetic in

the neck, the intraocular pressure diminished. Therefore the pressure in the vessels must always be greater than the intraocular. Dr. Exner says: From observations made upon many injected dogs and rabbits, upon whose eyes three or four weeks previously iridectomy had been performed, he is convinced that direct anastomoses between the iris arteries and veins are almost always to be found. It is well known that the iris is supplied with blood from the circul. arter. irid. maj., which radiates branches towards the pupil; there a capillary network forms which returns veins passing outwards behind the circular artery, terminating in the venous plexus of the ciliary body. Then, when the iris towards the pupil (as is the case when iridectomy upon the human eye is performed) is cut away, there remains principally arteries and venous trunks standing side by side, the capillary network being removed. As the blood is now forced into the arteries, the normal passage being closed, it finds a new channel, possibly through small vessels previously existing, directly into the veins, and without passing through a capillary network as before. "To see these relations well upon a rabbit's eye, it is necessary to make an iridectomy which does not remove more than the pupillary half of the iris, because here the circular artery lies midway between the ciliary attachment of the iris and the pupil." When a section of iris is removed, reaching almost to the circular artery, large vessels can be seen and followed to direct connection with veins, which go to the ciliary plexus. The Doctor has often seen these anastomoses, and did not consider them such, unless he was able to trace them from the circular artery to the veins and thence to the ciliary plexus. In many cases all vessels lying between the circulus and the cut extremity, were much dilated and tortuous, with scarcely any capillary network, which they normally of course should have. Dr. Exner also examined preparations of human eyes upon which iridectomy had been performed, and where the operation had resulted in a decrease of the intraocular pressure. In these it was very plain to be seen that the remaining edge of iris was much wider than is generally supposed, and Von Græfe remarked that the cure did not depend so much upon an entire removal of the iris section; that it was often sufficient when a

moderately broad piece was left. One can at least see that room enough exists for these anastomoses to take place. Upon the human eye it was not possible for him to observe so well, having no injected preparations; yet he saw the large vessels so close to the edge of the cicatrix that he could consider them nothing else than anastomoses. He thinks it certain, that the finer vessels neither have to undergo the journey through the tortuous vessels to the pupillary edge, nor the usual capillary network. When we consider the calculations of Davey, Girard, Hagen, and Poiseuille upon the resistance which tubes of smaller calibre than one-half millimetre exert against the fluids streaming through them, and when it is further considered that the side pressure in any tube, in its diameter, is determined by the greatness of the resistance which the fluid behind it yet has to overcome, it will be easily seen what an effect upon the pressure inside of an iris artery the cutting away a section of this long and narrow capillary network, and the substitution of a free and broad anastomosis, must exert.

But not only the pressure in the stumps of the iris arteries so excised must sink, but also that of the whole arter. circul. irid. maj. from which they sprung, and consequently in all the iris arteries which receive their blood from this circular artery. As this vessel, by the rami recurserites, is in direct connection with the vessels of the choroid, it follows, though in a less degree, that the intravascular pressure must be lowered here also. As it is very generally held to be a fact, that the intraocular pressure is directly dependent upon the pressure present in the entire number of bloodvessels in the interior of the bulbus, it is easy to see that the former must fall when the latter does.

Von Græfe says, after the operation the intraocular pressure often returns during the first few days, to disappear shortly after. This, Dr. Exner thinks, is because the anastomoses have first to be formed, when the pressure becomes permanently lowered. The extent of the iris section becomes of importance, as the effect must be the greater the more of this fine capillary network there is removed.

Dr. Exner thinks this explanation also makes clear the reason why even a total iridodialysis is incapable of lowering the intraocular pressure. "If now in place of an iridectomy, the iris is

torn away from its ciliary attachment, the stream in the arter. circul. irid. maj. will be broken, and the consequence will be, that no matter what kind of pressure in the vessels of the iris thus torn away may be generated, it will not be able to produce any effect upon the other portions of the iris and choroid vessels, because the circular artery as the regulator of these secondary changes has ceased to exist." That in this operation this artery is really broken, the Doctor convinced himself by making total iridodialysis upon an injected and alcohol-hardened eye. The whole circular artery remained adherent to the iris. Again, he tried the experiment upon the eyes of a newborn child, a few hours after birth, by injecting with Berlin blue and lime, and then allowing it to remain over night. (The treatment finally brings the color very beautifully out, when the tissues are placed some time in turpentine.)

This time the greater part of the circular artery again adhered to the iris, excepting only where the arteries were connected with it posteriorly. As the intraocular pressure is dependent upon the total pressure in the vessels of the iris and choroid (no doubt retina also), not, however, upon the number of these, the pressure is maintained at the same point by the mutual swaying back and forth of the processes of resorption and secretion, and the decrease in the number of vessels could only have the effect by any disturbance of the equilibrium of these, to make the restoration proceed more slowly. (It probably makes no difference whether the resorption is effected by the bloodvessels or by lymph-canals, now thought to be present in the eye, but not yet beyond doubt.) The Doctor then remarks, that when the iris is thus torn away, the arteries leading backwards to the choroid coat must be supplied by their anastomoses with the short ciliary arteries, and the branches given off by the long ciliary arteries before they form the circular artery of the iris. Further he adds, "the arter. cili. post. long., being deprived of the greatest portion of their capillary district, and also in the whole choroid, the intraocular pressure will be as likely to be increased as diminished." This last statement seems a strange one, in the face of his declarations as to the importance of the removal of the capillary network in the iris, in lowering the intravascular pres-

sure in a great number of the vessels of the eye, and thus the intraocular.

Might we not rightfully expect that when the entire iris was removed, the vessels not having to force the blood through this large capillary network, would transmit the blood with a lower pressure than before, if it does so after an iridectomy had been performed? I cannot easily understand why the presence or absence of the circular artery should make at one time an increase, at another a decrease of pressure. Then too it is not so probable that the blood is sent into the vessels with a certain force by the heart, when certain obstructions are to be overcome, and with less force when they are not present, etc. It is now known that the force of the circulation is not dependent so much upon the heart as it is upon the chemical force in the tissues themselves, thirsting, as it were, for the nourishing materials the blood has to give. That this state can be increased and decreased through the operation of the nervous system, is pretty well proven also. If, therefore, the iridectomy is effectual, it is more likely, perhaps, that some tissue having been removed, there is less to be nourished, that consequently the blood is not so strongly attracted and comes under a more diminished pressure than before, and the intraocular pressure is lowered. Of course, according to this idea the iridodialysis ought to be as effectual as the former, and the starting-point of the disease to be looked for in some of the nerve-trunks about the head, either cerebro-spinal or sympathetic. Indeed, without being able to give in full my idea, I would not be surprised if at no distant day this disease would not be easily and permanently arrested, by the section of a nerve or nerves yet to be discovered. To those disposed to question the utility of the investigation of a subject of this kind, I would merely remark that for all we know there is here a hidden truth which when discovered may bring to light something equally as brilliant and useful as the discovery of Von Græfe. In fact, there is nothing of this kind that is not worth investigation. We have, however, too few investigators, and this applies with especial force to our own school, as the greater part of our talent in this direction is apt to take the direction of "symptom hunting," reporting of cases cured by one dose of medicine after the lapse of

six months, etc. To bring a healthier state of affairs in this direction, endowed professorships are needed, that the teachers be not obliged to make their living in the practice of medicine. So much for a digression.

The investigations of Dr. Exner are certainly worthy the consideration of the profession. Further observation can only prove them correct or false. There are several points upon which, if the whole profession will, when they have the opportunity, make the proper observations, may help very much in the elucidation of this subject. They are as follows: First, as to whether a decrease in intraocular pressure can be produced simply by an extensive selerotic incision (difficult no doubt to do, except with aid of Calabar bean). Secondly, whether an iridectomy made in the above prescribed manner, but through a corneal wound, will suffice to lower the pressure. Thirdly, whether when an ischæmia retina, or embolus of the arteria centralis retinæ takes place, the intraocular pressure sinks; as it seems it should do if Dr. Exner's explanation is correct, especially when it is remembered how slight the anastomoses are between the retinal and choroidal systems of vessels.

XVI.

AQUA CHLORINII AND BARYTA JODATA IN OPHTHALMIC PRACTICE.

By C. T. Liebold, M.D., New York.

I desire to bring to the attention of the homœopathic physicians in general, and the members of the Institute in particular, these two remedies, which have during the past year been employed with the most marked success in some of the most unpromising cases treated at my clinic in the New York Ophthalmic Hospital.

1. Aqua Clorinii. Syn.: Aqua Chlorata; Aqua Chlori; Liquor Chlori; Aqua Oxymuriatica.

Aqua Chlorinii is the officinal name adopted by the Pharmacopœia of the United States, and should therefore be always used in prescriptions, to avoid any possible mistake.

In procuring this article especial attention should be paid that it is of recent preparation, kept in a well-stopped vial, and in a cool place, protected from the light, which soon decomposes it.

Only a dishonest druggist would substitute the Liquor Sodæ Chlorinatæ, which fraud could not be detected by superficial examination, but it is well to be on the alert.

In the fourth volume of that invaluable storehouse, the *Record of Homœopathic Literature*, by Raue, the only mention of Chlorine is by our distinguished colleague, Carroll Dunham, in difficult expiration (1870), confirmed by T. F. Allen (1873).

In the allopathic Materia Medica of C. Kolb I find that the contact of the gas produces on the external skin itching, pricking,

redness, transpiration, pustules, and blisters; on denuded surfaces pain and increased secretion; improves the smell of fetid ulcers.

In Von Græfe's Eye Clinic at Berlin it was used in the wards for blennorrhœic and diphtheritic ophthalmia as a disinfectant by the physicians, nurses, and patients. The latter began first to use it not only on their hands, but by accident or otherwise, also on their diseased eyes, and as its use proved not only harmless but beneficial, its application was systematically extended by Von Græfe to several hundreds of cases of the above-named inflammations, as well as to trachoma, pannus, and ulcers of the conjunctiva and cornea. While it by no means proved a specific for each and every case, certainly in many of the very worst cases even it was found to be of inestimable value.

Without enumerating all that Von Græfe has recommended it in, I will confine myself principally to that which my experience has so far confirmed.

a. In blennorrhœic and purulent ophthalmia, especially those caused by infection, as in ophthalmia neonatorum from the vaginal secretion of the mother, I use it often in a weak dilution (1 to 4) externally to the conj. palp. as often as the discharge makes it necessary, while giving internally the Bichloride of Mercury in the 3d trit. ($_{1}\frac{1}{0}$). If the mother suffers still from copious, especially fetid, uterine and vaginal secretion, I give the medicine in the 2d trit. to her alone, and also let her use an injection of Chlorine water, full strength, two or three times a day. Where the swelling of the papillæ conj. palp. is very great, the *Argentum nitricum*, externally in solution, gr. v or x to ℥j of distilled water, may be necessary. This should be applied once in 12 to 48 hours by the physician himself, which is far preferable to a more frequent application of a weaker solution, to be dropped in by the mother or nurse, perhaps the very worst kind of practice. Many cases get well with or without internal remedies alone, but severe cases will not before they have destroyed the cornea, and we see the consequences every day in our clinics. We use also the 3d trit. internally.

b. For phlyctenular conjunctivitis and keratitis, especially where it has produced large, irregular, and *elevated* ulcers on the

conj. bulbi. Last spring I was called in consultation to a granddaughter of our esteemed friend, John F. Gray, who suffered from this variety. While applying a weak solution at my first evening visit the child went to sleep in the arms of its nurse, and slept most of the night, a luxury which it had not enjoyed for several nights previously. Mercurii nitricis, 1st trit., gr. x to Aq. d. ʒiv externally, and the 3d trit. internally, is very often indicated; also Clematis, Euphrasia, Mezereum, Rhus tox., etc.

c. Trachoma (often called granular lids), and its consequent pannus of the cornea. In the very worst chronic cases often of the most benefit. Also Cuprum aluminatum externally and internally, and Cuprum nitricum.

d. In Ulcers of the Cornea. The appended detailed case is a fair specimen of the use and value of the Chlorine water. As it has been asked, "What cured the case?" I may here remark, that I never had succeeded before in curing a similar case with internal remedies alone, and preserving useful sight, neither have I seen others do it.

That it is no panacea for all cases of sloughing of the cornea from whatever cause, I have found among others in a case at present under treatment in the hospital. A brakeman on the Erie Railroad was struck by a cinder from the locomotive, in the left eye; fourteen days after admitted to the hospital. Status præsens: Œdema of lids of left eye; great swelling and redness of conj. palp. et bulbi; copious blennorrhœic discharge, cornea sloughing; only centre of about two lines in diameter free yet; lower section appears whitish like curdled cheese. No improvement under Sol. Aq. Chlor. 1 to 3, for two days, except less discharge. Improves under instillation of olive oil every hour or two, and Hepar 3d internally every three hours.

Olive oil is by far the best external application I know for traumatic inflammation from actual heat or chemical substances, especially lime.

In otorrhœa I prescribe it frequently with good success.

Chlorine destroys the efficacy of the vaccine virus. How it acts on the gonorrhœal or syphilitic poison I do not know. I should certainly think it worth a trial.

CASE FROM THE OPHTHALMIC HOSPITAL CLINIC OF PROF. C. T. LIEBOLD.

REPORTED BY F. H. BOYNTON, MEDICAL STUDENT.

Ring Ulcer of Cornea.

Miss E. M., æt. 19, Point Pleasant, N. J. Ruddy complexion, dark-gray eyes, brown hair. For the last two years has suffered from weak eyes. On the afternoon of July 25th, 1873, went sea-bathing; stayed in the water about an hour; became quite chilled.

For three days following experienced a dull headache. 28th. Mist came over right eye; no pain. 29th. Conjunctiva became reddened. Photophobia; sharp and lancinating pain going through the eye antero-posteriorly. 30th. Pain intense; photophobia increased; eye commenced to discharge yellowish matter. Has had up to this time alternate heat and chills.

Applied to an allopathic physician, who administered a wash and internal medicine. Eye became rapidly worse. Employed another physician for five days with no better success.

She came under Dr. Liebold's care August 6th; was suffering intense pain, great photophobia; both lids were very much swollen, and of a dark-purple hue.

The eye was discharging large quantities of an acrid purulent matter.

Upon inspection found two large corneal ulcers; lower ulcer was located near lower and outer border of cornea, about two lines in extent. Upper and larger ulcer, extending out and upwards following circumference of cornea, four lines in length, one to two lines in width, and apparently one line in depth. Uncertainty of depth is owing to the fact that the cornea appeared swollen and œdematous at the borders of the ulcers, which were as if chiselled out, and were, as well as bottom, perfectly transparent. Both ulcers had perforated, prolapse of iris following in each. The larger ulcer had probably perforated while on the way to the hospital, as she had that day noticed a sudden watery discharge from eye. The ulcers were virtually connected,

forming a half ring from lower border to outside, and upper half embracing full half of circumference of cornea. Conjunctiva was very much swollen and inflamed; it seemed to fold itself over upper and lower borders of cornea. Papillæ were very much enlarged, as in severe cases of blennorrhœa. She was having considerable fever, tongue coated, very poor appetite; was admitted into hospital and put immediately to bed.

Treatment.—

℞. Merc. Nit., 1st. trit. ($\frac{1}{100}$), gr. xv.
Aquæ Communis, ℥ij.
S. For external use.

The eye was thoroughly cleansed with warm water every half hour. At each dressing the solution was applied directly to the ulcers with a camel's-hair brush. Cloths saturated with solution were kept constantly over eye. Internally, Chininum muriaticum gr. ss. were given every two hours.

On account of the total loss of appetite, brandy was given in tablespoonful doses in milk every two hours. This treatment was continued for twenty-four hours with no improvement.

August 7th. Discharge more profuse; severe pain; feverish; loss of appetite.

℞. Aquæ Chlorinii, ℥ij.
Aquæ Communis, ℥iv.
S. For external use.

Internally Calcarea hypophosph. 1 ($\frac{1}{100}$), gr. vi, every two hours. Eye was dressed every half hour, and ulcers brushed with solution; linen compresses saturated with the solution were kept over the eye, covered with oiled silk. For the following twelve hours I saw her at intervals of an hour each. At each visit I noticed a gradual abatement of pain and diminution of discharge. The dressings were continued every half hour until the following morning.

8th. Great improvement; slight discharge, no pain, no photophobia; applications made at longer intervals.

9th. Easy, very little discharge; appetite improving; sleeps well. 10th. No discharge. 11th. Ulcers begin to heal. 12th,

13th, 14th. Steady improvement; new tissue forming, transparent; conjunctiva very little inflamed.

20th. Ulcers healed; some opacity of cornea; can count fingers at eight feet.

25th. Cornea gradually clearing up; walks out every day. The adhesions of iris still exist, but the pupil is not as much dislocated as would be naturally expected. Since August 11th, has taken medicine but three times a day; medicine is now stopped. Sept. 1st. Continues under treatment to clear the scar tissue up as much as possible. Three months later, scarcely noticeable, and vision almost perfect.

2. Baryta jodida. Syn.: Baryta jodata; Barium jodatum.

Barium jodatum is the name given in works on chemistry. As none of our homœopathic pharmacies had any preparation of it, I procured a pure and fresh article from the well-known laboratory of Merck, in Darmstadt, Germany, and had triturations of it made. The third and sixth of these have been used by me. Judging from the meagre reports in the *Record of Homœopathic Literature*, even the old Baryta carbonica is but very rarely used in ophthalmic practice, and then only as one among many others. Amblyopia from old age (Small), Cataract (Kirsch), Morbus Basedowii (Hirsch and Chisholm). I have not been better than the rest, but being troubled by many cases of recurring phlyctenular conjunctivitis and keratitis in extremely scrofulous and debilitated specimens of humanity, as they can, perhaps, only be produced by a total want of fresh and pure air and milk, and as neither Calcarea or other polychrests gave satisfaction always, I have begun to use the Baryta more frequently. Recent researches seem to prove that pressure or irritation of the sympathetic nerve in the region of the neck, may be or is a source of certain forms of ophthalmia. In some cases of scrofula the course of the lymphatics feels like a string of beans; everywhere between the muscles, down to the spinal column, they can be felt of all sizes and all degrees of indurations. Perhaps some are suppurating, while others have healed with an ugly scar. These are the cases for Barium jodatum. The affections of the osseous and cutaneous systems appear in these cases only of secondary importance.

The Calcarea patient is often round and fat, and sometimes of precocious intellect; the Baryta patient quite the contrary, stunted in everything. If there is any fat it is collected in fatty tumors.

The Iodine has been combined with many other remedies, as Arsen., Calc., Merc., Sulph. But the combination with Baryta seems to be a remarkably happy one. We have no other two remedies which affect more pre-eminently the lymphatic system.

The new combination has not been proved yet, as far as I am aware. Though Berridge has it in his *Repertory*, I have not found it credited with a single symptom in his anatomical regions of the eye. I cannot offer any keynotes to the souls that have music in them. But I have seldom been more favorably impressed by the action of any remedy than in one of the first cases to which I gave the Bar. jod. It was a little boy from the Home of the Friendless, about 8 years old, pale and puny. His neck seemed to consist one half of scars and the other half of swollen glands, and the bones, with a few thin strings of muscles, more like tendons. I had prescribed for him, off and on, for two years perhaps. Had enucleated the right eye on account of a very large, unsightly, total staphyloma, which prevented his adoption by any family, and the other eye had several leucomatous spots on the cornea from previous ulcerations. He received a two-drachm vial with the sixth trituration, to take a dose night and morning. About two months afterwards he was brought to the hospital again, when I actually did not recognize him at first at all, so much had he changed in every respect for the better.

XVII.

ENGORGED PAPILLA AND ITS SIGNIFICANCE.

By W. H. Woodyatt, M.D., Chicago.

Now that the attention of the physician is fully directed to the valuable aid to be derived from the use of the ophthalmoscope, in the study of cerebral changes at all events, it seems not inappropriate, nor without advantage to this body, to note briefly the appearances of this condition, so frequently found and frequently miscalled. No one will make many examinations of the fundus of the eye, in observing brain diseases, without seeing it, and a correct appreciation of the intracranial difficulty will depend almost entirely upon a proper understanding of the nature and cause of the state of the disk. The point of attachment between the optic nerve and the globe of the eye, or what is commonly spoken of as the "blind spot," is here called the papilla. It is the end of the optic nerve, from which its fibres spread out upon the retina. As the nerve passes through the sclerotic from behind, it is constricted, narrowed in its diameters, the fibrous sclerotic acting as an unyielding ring, and that part of the nerve lying between this ring behind and the retina in front is the part involved in engorged papilla or choked disk, or ischæmia papilla, as it has been called by different writers. This condition has been confounded with inflammation of the nerve, optic neuritis, and the latter has in many instances been given as a concomitant of certain brain troubles when the former, pure and simple, alone existed. The mistake has led to false reasoning and erroneous conclusions, which of course are to be avoided in

the future by a true conception of the nature of each. Had they been comprehended in the past, many of the questions would have been settled which now await the evidence of clinical experience and the subsequent revelation of the post-mortem examination. Investigators, seeking the testimony of colaborers, are confronted with this confusion of names, and though able to conjecture the real condition of the parts, are restrained from offering it either as confirmation or contradiction, so that each case of meningitis, hydrocephalus, or tumor, studied carefully with regard to the changes presenting themselves in the optic disk and accurately reported, will do very much to purify and enlarge our knowledge of pathology in this department. Indeed, when we consider the fact that our knowledge of nerve change throughout the entire system depends largely upon these observations, their importance and significance become apparent; for here, as nowhere else in the body, are we enabled to keep under inspection the nerve-tissue undergoing proliferation, metamorphosis, and atrophy, and what is *seen* to be true here can be affirmed as truth in connection with other nerves similarly affected, especially when the microscopic examinations show a corresponding likeness.

Von Græfe, in 1866, published the fact that congestion and swelling of the optic disk, with effusion, are often due to vascular arrest alone, and since then many careful examinations of this condition have been made at different stages in the process. Although often associated with optic neuritis proper, and not always to be distinguished from it, yet the choked disk is quite a distinct state, and capable of clear definition. It may not produce any noticeable disturbance of vision, and would never be observed if we waited for the patient to complain about his sight. It is caused by anything which produces distension of the ophthalmic vein, the effect being very much greater on the retinal veins passing through the optic nerve from the eye, on account of the sclerotic ring mentioned above. This acts as a multiplier, and heightens the effect very markedly. As causes, then, we have meningitis with its deposits, hydrocephalus, and tumors; and among the last are cysts, aneurisms, exostosis, or any collections under the dura mater. Hydrocephalus is sometimes an

intermediate cause, as, for instance, when a tumor of the vermiform process of the cerebellum causes pressure upon the veins of Galen, or when there is pressure upon the lateral sinuses, or when communication is stopped between the fourth ventricle and the subarachnoid space. Whenever found, it is as a symptom indicative of cerebral disorder, and in many instances the only thing that will enable us to say positively that the coexisting symptoms are due to structural change, and not to disturbance of cerebral function. In the case of a child suffering from some brain trouble, for instance, in which the symptoms are by no means well defined, the physician will be at a loss to know whether the restless sleep, with loss of appetite, occasional vomiting, slight ill-humor, indisposition to play, lack of power to concentrate the mind, slightly impaired memory, mean tubercular meningitis or not, until the use of the ophthalmoscope shows the disk to be engorged, when all doubt is at an end. In the large majority of cases of mere ischæmia the nerves may recover their health and function, though it may lead by successive steps to neuro-retinitis and consecutive atrophy.

Assuming that the appearances of the normal fundus are familiar, the following description of fully developed engorgement will be understood. The first thing to attract the observer will be the swollen projecting disk. No longer flat, or physiologically cupped backwards, it protrudes towards the anterior part of the eye, rising steeply on one side, and sloping gradually down to the other, something like a wedge. The effusion that has caused this swelling has distended some of the capillaries, and ruptured others, so that the color now, instead of being a pink and white, is a mixture of dirty gray and red, though in some cases there is no extravasation of blood, and the disks may be almost transparent. In seeking for the margin of the disk, usually so sharply defined, we find it concealed by infiltration, which extends on to the retina for a distance about equal to half the diameter of the papilla. From this point the retina is quite clear, unless occasionally streaks of exudation are found along the course of the larger veins. The veins themselves are much enlarged and tortuous, both in the plane of observation and from before backwards.

The microscope shows the disk to be enlarged and thickened, with exudation into its substance. Its vessels are enlarged, distorted, and thickened. There is some cell and nuclear proliferation in the course of the vessels, and in the cribriform plate. In the fibrous portion of the retina are found homogeneous bodies, without limiting membrane or nucleus, probably the result of broken nerve-tissue. All of which points to subinflammatory congestion, due to disturbed or arrested nutrition.

APPENDIX.

DISCUSSIONS.

[Third Day's Session.]

W. H. WOODYATT, M.D., Chicago: There is one point concerning the treatment of catarrhal inflammation of the middle ear to which I wish to call attention. It has reference to the prognosis. It is one of the several forms of disease of the ear that we have to treat, and one that offers the least favorable results, sometimes; but I do not wish the impression to go abroad that it cannot in general be cured. Although a great amount of time has to be spent in the treatment of these cases, yet when treatment is continued and persevered in carefully, very good results indeed generally follow. I have treated a number of cases that have taken somewhat the following course: When the patient comes, he asks as to probable results, and the time required for a cure, and he expects an answer. Now, of course it is impossible to speak positively as to either of these points, but I generally tell them that such cases can generally be cured, and it remains to be seen, in this particular case, what effect treatment will have if continued for several weeks, or for several months, as the case may be. They are generally, then, willing to place themselves under treatment; but the trouble is to hold them. Sometimes beneficial results are observed after eighteen or twenty days of treatment, and then they are encouraged to go on; but sometimes this does not follow; and you must then endeavor to persuade them to continue, as they can only be benefited by continuous and persistent treatment. The best plan is to be candid and honest with them, and if you feel that a long period must elapse before they will be benefited, and that it is impossible for you to give them an opinion until you see what can be done, you had better tell them so. They are generally willing to go on under such circumstances. And sometimes when improvement has set in, they will take cold, and will drop back again to their former condition, and then they will go on improving again, gaining ground in advance of what they occupied before. Say you get an advance of five or six inches, and the patient takes cold and drops back to four; they will hold on at

this awhile, and then will gain, until you get an advance of eight, ten, or twelve inches, and you are able to congratulate your patient on having made such a gain in two or three months; but perhaps on the next day they will come back to you, and you will find that the point at which they fail to hear the watch is the same at which they failed on the first visit. Then they will be discouraged indeed, but you must not be, for they will probably gain the lost ground very rapidly, and so go on improving until they are finally cured.

H. C. HOUGHTON, M.D., New York: I hope I have left no wrong impression on the mind of any one by my paper. I tried to make every point very plain, and hope I have succeeded in doing so.

T. P. WILSON, M.D., Cincinnati, O.: The history of this bureau is a brief one, and this is our third appearance before this Institute. I think we can congratulate ourselves on the favorable showing we have made at this meeting. I do not doubt but that it is wearisome to some of you to listen to papers and discussions on these special subjects, which are of little interest to the general profession; but we trust to being able to awaken your interest in these matters. We unfortunately have many cases of diseases of the eye and ear come into our hands for treatment, that have been wholly misunderstood and improperly treated by general practitioners; and we see the deplorable results. Now we wish to impress you with the importance of doing one or the other of two things, viz., either make yourselves acquainted thoroughly with the whole science and art of ophthalmology and otology, or send cases of disease of the eye and ear to men who have made them and their treatment a special study and practice. We trust to be able, in years to come, to make the departments represented by this bureau second to none in the annals of practical medicine and surgery, and we call upon you to lend us your aid in the efforts we propose to make.

(SPECIAL SESSIONS OF THE BUREAU.)

Dr. H. C. Houghton was called to the chair.

DR. HOUGHTON: Gentlemen, we have met for free and fraternal discussion of the topics which interest us. What course will you pursue?

DR. T. P. WILSON: I wish to raise some questions concerning the use of Politzer's air-bag. In the first place, as to the number of times the ear has to be inflated at a sitting, and how often the sitting has to be repeated; also, do others meet with the same difficulty in the introduction of the catheter?

DR. VAN NORMAN: I wish to be informed as to the benefit of injecting the middle ear with warm water vapor in cases of non-suppurative inflammation of the middle ear; also, what the experience of others is in the use of other injections.

DR. WOODYATT: Drs. Roosa and Pardee, of New York, have reported a number of cases treated by the use of warm water vapor, and have advised it as a useful measure in many other cases, but my experience is limited. I have given injections of iodide of potash and sulphate of zinc a more extended trial, and have now discarded them, except as applied through the atomizer, *i. e.*, instead of injecting directly through the catheter into the middle ear, I use them applied in the form of a spray to the nasal passages. I have done this because I reasoned that the catarrhal inflammation, even if helped in the middle ear, would be likely to recur again if the catarrhal inflammation or condition of the nasal passages be allowed to remain. I find this condition of the mucous membrane removed by the injection of the spray of the iodide of potash and weak Hydrastis, and in acute forms I use the spray of Sanguinaria in the same way. In acute forms of suppurative inflammation I have never found any necessity of going beyond these remedies.

DR. HOUGHTON: As regards this matter of dealing with injections into the middle ear, of course the various injections are used; we have all of the forms of alkaline and acid preparations. I will dispose of the whole of them with a remark. Of whatever form, they are liable to be followed by acute inflammation. During the past few years, while treating these cases in connection with electricity, that was the difficulty.

A suggestion came from Dr. Campbell, in his little work, *H. Campbell on Deafness.* The solution which he used was a weak one of the iodide of potassium, or one of marine salt. Necessarily the basis of all the different injections must be some easily decomposed salt. Now as to the method of applying it. I am a thorough homœopathist, yet I see no more objection to the thorough cleansing of the posterior nares with a dose of iodide of potassium or marine salt than in the cleansing of the nostrils with the handkerchief. I proceed on that basis by a thorough washing of all the parts. I have used Gruber's method with a warm solution, one part to one hundred of iodide of potassium, and immediately applying the galvanic current, following the application with Politzer's method of inflation. The patient will respond to the current at once by a sense of warmth.

I believe that benefit is derived from the use of the saline solution upon the entire mucous membrane, and upon the Eustachian tubes.

Often acute inflammation will set in, but we can control it with our remedies according to the indications, Belladonna and Mercurius being the ones for this inflammatory action.

DR. WILSON: I would like to hear from Dr. Houghton as to what is the usual amount of use given to Politzer's instrument. How many inflations do you give to a patient at a sitting under ordinary circumstances? How many times would you attempt to force air into the ear where its passage is resisted? The books do not lay down whether it shall be used once or twice, or fifty times, or whether there be any limit to be observed in the number of inflations that we should give. Then I would like to inquire what the opinion of this body is as to the use of the catheter in preference to the Politzer; whether we are not subjecting the sound ear to too much pressure and disturbance to get the effect? Whether it is not better, in treating the aural catarrh on one side, to use the Eustachian catheter in preference to the Politzer? Then I would like to ask how much difficulty is ordinarily experienced in the average run of cases in the introduction of the Eustachian catheter? I may say, in my own experience, that sometimes it is very easily done, and again I am sorely puzzled to know the result of the inflation; either the patients are stupid or I am unskilful, or the passage is impossible to make. I will say here that when I have a variety of patients to treat I use a flexible catheter, and when, after having experienced considerable difficulty, I have passed the catheter in and hit the opening of the Eustachian tube at some particular angle, after repeated trials striking it nicely, I then immediately go to a little book which I have for the purpose, and make a drawing of the peculiar curve of the instrument, and write the name of the patient there, so that when the patient returns I have the exact curvature; when other patients come in I can change the angle of the instrument to suit each case. Then comes the question, whether there is a limit to the amount of force with which the air should be driven in.

Of course I suppose that you, as I do, use a small bag for introducing the air. Dr. Woodyatt spoke of using the mouth; I have not done that for some time. I am in doubt, sometimes, whether I am carrying the end of the catheter too far or not far enough, or just sufficient to cover the point of entrance.

DR. WOODYATT: Dr. Wilson has asked a good many questions, and I do not know whether I shall be able to answer them all or not. It makes a man almost shrink from having his practice made a highway. Our text-books, after telling us how to do things, leave us without the experienced one to tell us whether the thing done is rightly performed or not.

You do not always know when you commit mistakes. I guess everybody has experienced that difficulty.

We use Politzer's air-bag for certain diseases. You want to know whether we use it once a day, twice a day, or once a week, or three times a week; when to use it and how often. I have settled that point about this way.

If I have a case of acute inflammation of the ear, even where it does not go on to the extreme point of free exudation, that is where the parts will admit of a certain amount of excitation, both in the Eustachian tube and middle ear, without the pressure that produces severe pain, and where the nerves separating from the dermoid layer are not involved, here the use of the Politzer's air-bag is really the only way to control it, and drive the catarrhal secretion into the mastoid cells, or make it sweep around the tympanic cavity into the pharynx. I use it in one way in one case, and when treating another form of trouble I use it in another way. To illustrate: you will have a patient, perhaps a little girl, and she has had difficulty with her ears; that is all the history you get; you examine her and you find an acute inflammation; you use your catheter or Politzer's air-bag; you find by the first inflation your treatment makes only the slightest difference in the world; there is nothing to express it; you find by measurement with the watch that the hearing is a little improved; you have done some good. But I have found, even after this, exudation will go on, and in a little time the Eustachian tubes will close again, even while I am giving Mercurius, Hepar, or Calcarea carb. It is absolutely necessary, just as Dr. Houghton has said with regard to the other cases, to keep those passages clear, just as you keep the nose clear when running, or else they will close sometimes in twenty-four hours; but in many cases one inflation each week suffices. If so, you have no cause to use it more frequently; perhaps once will be sufficient for a long period of time, the medicines being used all the time. Where I use the bag, or other modes of inflation, I use it invariably three times a week; I do not know whether it is the force of habit or not. When I do, it is only to have the patient feel the pressure in the tympanum. I generally use the diagnostic tube; that is, one end of the rubber tube in my ear, the other in the patient's. I listen, and by that means am able to detect the condition of the parts.

I think some who have written about the diagnostic tube have written the thing to death. I know by the sound conveyed to my own ear whether the air is passing into the tympanum or not, and whether it passes through a small aperture or goes through squarely against the drum-head. I use Politzer's method

so that the patient feels it, and if the first time does not do this I use it again.

I have no definite rule on that point.

Then comes the next point, as to the use of the different appliances for inflation. You sometimes use the Politzer and cannot succeed, and again the use of the catheter is not effectual, even when you think you have the catheter in position at the mouth of the Eustachian tube. I use a nasal tubing on my patients, about twenty inches long, with a cone-shaped bulb. I have my patients swallow, and just as they swallow I blow; sometimes that will not do, and I first fill the little bulb with ether, fill it up level, then proceed as before; the vapor of ether will pass very readily, and the inflation is more effectual. I want to say another thing: I commenced using it to force a passage through the Eustachian tube; I did not know that it had any therapeutic value, but now I am inclined to think it has. It seems to me in these cases of non-suppurative inflammation, you will do harm if you are not careful. I have found the use of ether to produce very good results in allaying the tinnitus aurium in a short time. I have used it now with very decided advantage in numbers of cases, both in my own practice and in the dispensary.

DR. WILSON: Will you please describe your instruments?

DR. WOODYATT: The one I put in my mouth is a plain rubber tube. The tube you put in the nose is a conical glass bulb, and you fill it up to the level of the inlet and outlet with the ether.

DR. HOUGHTON: Professor Roosa, of New York, has the same thing in hard rubber; he has come to the same view as to the value of chloroform for diagnostic purposes, but speaks cautiously concerning it therapeutically.

DR. WOODYATT: I used it in the way mentioned, and got very good results from it, actually increasing the hearing by its use. I have found the hard rubber catheters valuable instruments; they are light and easily moulded to meet the necessities of such cases as those mentioned by Dr. Wilson. They only need to be put into hot water, and the curve changed for different parties. By the way, the Doctor has not overlooked the fact that many times he may be deceived by dipping the end of the catheter into Rosenmüller's fossa, instead of the mouth of the Eustachian tube. Sometimes where there is a little abnormal growth, or the granular condition that we have in the throat, granular pharyngitis, these may prevent its entrance, but that trouble can be overcome by practice.

A DELEGATE: I do not think I understood Dr. Woodyatt, as to how he introduced the vapor of ether into the middle ear.

Do I understand you to say that you blew into the end of the tube, and then into the nostril, and did not use a Politzer bag? Is that what I am to understand?

DR. WOODYATT: I direct the patients to swallow, and while they swallow I blow, and the vapor passes readily. I do not use the air-bag then. I know there will be an objection to the use of your own breath, but since I quit smoking and drinking and other things, I use my own breath.

DR. HOUGHTON: I simply wish to say that I think we are getting a good deal of valuable information from each other as to methods of dealing with cases, and as our banquet comes at four, if we could have a session this evening I should enjoy it.

There are a number who want to hear our papers read, and I hope a motion to that effect will be offered before we close. Now with regard to this injection of fluids, and the use of the catheter and the Politzer's apparatus, I would simply bring to your notice, and the notice of the profession, a little instrument, a combination of the Eustachian catheter and the Politzer's air-bag; by means of this, a current of air can be driven into the tympanum itself. It is very difficult to satisfy your patients at once concerning the value of special treatment; this you know from your own experience, and it is well to use all proper means to secure their confidence, until from the symptoms the patients give you (subjective), also from the objective appearance of the membrana tympani, and the results after inflation has been used, you can satisfy your own mind as to prognosis; then one application of Politzer's will often make manifest changes that compel confidence for a time at least. I think as regards all these matters there can be no single rigid rule laid down; we must hold ourselves at liberty on all these points.

As to the contrast between the catheter, Valsalva's method, and Politzer's, as now used in certain cases, the Valsalva's method I would say is useless as a means of treatment, and we may do a deal of mischief in using it, for if prolonged great pressure is exerted, and the head becomes congested, the membrane is forced forward, whereas all we want is one single impulse or movement of the air; this we can secure by Politzer's method. I have known many cases of relaxed membrane, and extreme tension of the membrana tympani, result from this frequent inflation.

I use Politzer's method generally, but in cases in which it is ineffectual I then use the catheter, and follow with Politzer; also in semilateral cases I prefer to use the catheter, thus avoiding unnecessary inflation of the healthy tympanum. I have found, as other gentlemen have, a deal of mischief come from the im-

proper use of the instruments. I agree with Dr. Woodyatt also, with regard to the two kinds of catheters. There is now a catheter in the market, I think it is French or German, I am not positive which, that is very smooth and flexible, and made out of a material apparently very different from the rubber which we ordinarily get from our American manufactories; it is smooth and pliable, and almost as good as silver.

DR. WILSON: You did not touch upon the number of inflations.

DR. HOUGHTON: Usually two or three; in some cases I used some five or six inflations till impression was made upon the tympanum, and let the matter rest there, allowing the patient to go one week between the times of the inflations, and I am satisfied from my practice during the last five years that this is the best plan.

I am a little afraid now of putting the Politzer's bath into the hands of a patient as freely as I did in my early practice; I think great mischief is done sometimes in that way.

DR. WOODYATT: One thing occurs to me, in connection with Dr. Houghton's remarks; it is an explanation why I use the inflation as often as I do. I had to ask myself the question, whether I was bringing these patients back for their money, or bringing them back to cure them? but the relief afforded warranted the frequency of application.

DR. HOUGHTON: You all use Siegle's speculum. I have found it of value in breaking up adhesions in the tympanum. I attach a breast-pump to the mouth-piece, and exhaust the air from the speculum while it is held tightly in the meatus, watching closely the effect produced; the membrane is drawn forward, and the adhesions put on tension; in a number of cases the hearing has been immediately and permanently increased.

But, gentlemen, we must close.

Motion to adjourn till 7 o'clock P.M. Agreed to.

At 7 o'clock P.M., the bureau met, according to adjournment. By request of the chairman the following papers were read:

DR. NORTON read a paper on Secondary Glaucoma from Ribbon-shaped Opacity of the Cornea.

DR. T. P. WILSON read a paper on Retinitis Brightii.

DR. LIEBOLD'S paper on Aqua Chlorinii and Baryta Jodata in Diseases of the Eye was read by Dr. Norton.

The CHAIRMAN: If it is your wish, we will resume the discussion at the point at which we left it when we adjourned. We were speaking of the use of Siegle's speculum in breaking up adhesions.

DR. WILSON: I do not wish to speak of that just now. I wanted to say something in regard to a thought that struck me, on the matter of sudden restoration of the hearing by loud noises, and it suggested a case or two.

I had one case, in particular, under treatment, where the catarrhal condition seemed confined to the Eustachian tubes almost exclusively, which was apparent from the appearance of the tympanic membrane; but the case showed very considerable difficulty in forcing the air into the tympanic cavity, and there was also a concomitant tinnitus aurium, pretty continuous, which may possibly indicate to you the existence of the difficulty beyond the tube proper; but this case was accompanied with a high degree of catarrh of the posterior nares and the fauces. This gentleman I had under treatment for some time without any special benefit. He left and went down to New York on business, and was gone a month. In a few days after he landed in New York, I suppose in virtue of the fact of the very superior aural advantages of the city or otherwise, though he did not apply to any of the distinguished aurists, the tinnitus entirely left him.

DR. HOUGHTON: Local influence.

DR. WILSON: That did not affect him. Whilst he was there he had a slight impairment of the hearing, which also left him. I may say his general health was at all times good.

He remained for some length of time in the city, attending to his usual business, and experienced no sort of trouble with either of his ears. When he returned to our city, he had not been at home forty-eight hours before the tinnitus aurium came on, and also his hearing diminished slightly. I put him under treatment, with a slight improvement of his case, but did not get the results that I wished. He went down to New York again upon business. All the time he was gone—owing to the causes I have intimated, undoubtedly—his subjective symptoms entirely subsided, and when he returned home a second time, they returned upon him with their usual severity.

The question I would ask, in connection with the relation of the case, is: How far changes of climate are likely to effect such catarrhal conditions of the ear? Or: Have you noticed such changes following a change of residence?

These are some of the points I have thought of.

DR. HOUGHTON: They would come in connection with this subject very properly.

DR. NORTON: Was that change due to the climate, being near the sea air, or was it due to being in a large city where there is excessive noise?

DR. WILSON: I do not wish the gentleman to cast any reflections upon our little town. We have noise and dirt; with every street and lane covered with cobblestones of the roughest variety; we have all the thunders of Niagara, at least during the greater portion of the day. I should not accept the gentleman's suggestions as pertinent at all.

DR. WOODYATT: I would like to ask Dr. Wilson what amount of new hearing was developed as tested by his watch; also whether the use of the catheter or air-bag improved that very markedly, and was there any change of the drum-head after he inflated; was there any resonance of the voice through the head, or what is commonly known as autophonia; also, did he try introducing the catheter, and if so, did he find the nasal passages lined by very thick mucous membrane? These are the only questions that occur to me.

DR. WILSON: This case has proved of deep interest to me. I have had two or three of them, and the facts of the cases I shall state. I spoke of the difficulty of introducing the Eustachian catheter. This was one of the most troublesome cases I ever had. Using the Eustachian catheter, I made a great many attempts before I became satisfied that I introduced it, and then only by a peculiar curvature to the instrument. What was peculiar to my mind was this: I had to place the catheter back against the posterior wall, and without advancing it at all, swing it around upon itself into the Eustachian tube. Only in that way did I succeed in getting into the mouth at all. I did not discover that fact, I am free to confess, for some time. In trying it, I did not know where to find the orifice, and I judged one of the difficulties of treating his case was on account of some abnormal position of the outlet of the tube by which it was encroached upon, or at least bruised, causing a slight puffing of the mucous membrane. There was not particular increase of the discharge. It was very easy, on account of these circumstances, to close the mouth of the tube, and I treated him first with the Politzer, unsuccessfully, and did not observe at any time, in using the Politzer, that there was any special modification of his subjective symptoms, nor did I notice any change in the position of the tympanic membrane; but subsequently, when I found how I could get at the Eustachian opening, I treated him successfully with the catheter. I succeeded in pretty largely relieving his case. He is now under fair prospect of recovery.

A DELEGATE: How about the watch?

DR. WILSON (resuming): I could not tell without looking at my notes. His hearing was reduced almost one-third, and has been perceptibly improving, although he is not well.

DR. WOODYATT: The Doctor's case strikes me as being one that might be considered spasmodic stricture of the Eustachian tube. The Doctor did not tell us about the resonance in the head, or whether he complained of it.

DR. WILSON: He certainly made no marked complaint of it, or I should have recalled it. It may have existed.

DR. WOODYATT: There has been very little written on autophonia; on tympan autophonia there has been somewhat more written, and it has been written in connection with such cases as this last one. I have found cases that resemble it somewhat; in them there was nearly always a marked history of a very bad catarrh. Both of the cases that I have in my mind I examined very carefully. In one the mucous lining of the nasal passage was very much thickened, and the vomer eaten through; and in the other case, the passage was so much stopped, just about midway between the external opening and the pharynx, that I could not get a catheter through without causing a rupture of the capillaries. This is not anything unusual; but I did force my passage, although it caused capillary hemorrhage, and a great deal of pain, of course, threw the catheter out of position, up higher than it ought to be, to the middle turbinated bone. I found that the patients were troubled with this resounding voice through the ear; also that was relieved when I succeeded in inflating either by the use of the catheter or by the other methods. I found it also relieved when I used a spray of Hydrastis. I found it also relieved by the patient lying with his head straight back or straight forward, and, if it was sideways or elevated, then the noise was just the same.

The deafness did not seem to be *pari passu* with the different movements, or with the autophonia; also I noticed that when the autophonia would change, the hearing did not change so markedly, although it did change some. The men in these cases complained very little of their deafness; one man said he did not know that it was deafness. The patient seemed to have some relief when he laid down at night. As to the prognosis of these cases, it should be more guarded than you would suppose in simple spasmodic conditions, for in passing the catheter, or introducing any of those medicines looking to the relief of the patient permanently, it requires a good deal of patience to follow a case through and produce permanent relief. I have had cases stay away three, four, and five weeks, and even for a year, and then come back again after I had labored at them for nearly three months.

DR. HOUGHTON: I would be glad to offer a few remarks with regard to these cases, and the case which Dr. Wilson has men-

tioned, but it has been explained by Dr. Woodyatt. It seems to me that this is a type of a class that is larger than we have been accustomed to think. I find a good many cases that have not possessed in any particular measure the excessive catarrhal condition of the Eustachian tubes, and yet should be classed as catarrhal cases; in these cases a person has a good deal of secretion about the throat and nostrils in the morning, and then during the rest of the day is quite comfortable. These cases are those which Meyhoffer calls follicular or hypertrophic pharyngitis, and possibly laryngitis; in these cases there takes place just that process which takes place where mucous membrane overlies muscular tissue, the muscle loses its density and undergoes fatty degeneration, and the fatty cells take the place of the muscle cells. These cases have troubled me, and still trouble me, and I am glad to suggest one thing that helps; while we look after our remedial agents, and our mechanical appliances, we must use the pharyngeal gymnastics to develop the muscles by directing a gargle every morning and evening with salt water; marine salt I have used more than anything else, the patient throwing the head back into this position (indicating gargling), thereby strengthening all the pharyngeal muscles and their attachments to the Eustachian tube. The patient improves decidedly under that treatment, when there is added to it the galvanic treatment; and I have been able to do more with this treatment than with any and all others; its effects are seen everywhere, restoring the tone of the muscles by making a direct change in the nutrition. I have a case which illustrated the benefit derived from change of residence, exactly as Dr. Wilson has illustrated by a gentleman going to New York. The gentleman went to Cincinnati, and was benefited in the same way; he was a patient of mine, being treated for the same conditions as mentioned, suffering from nervous prostration; and we find when the mind is overtaxed and giving out in all directions, the muscles also loose and flabby in texture, that a change is often beneficial. This patient went from New York to St. Paul, and from St. Paul he passed down to Cincinnati; his tinnitus all disappeared, and the man can hear the voice and the watch with remarkable facility. He was delighted, and not only this, but his whole condition was very, very much improved; so much so, that on one occasion, by exposure to rain, a fair drenching in a storm had no effect, and it appears it did not seriously injure him. He slept soundly, and was well the next day; he came back to New York, and fell into the same habits of life, and in less than a week his whole condition was the same as it was when he went away, and it seems to me it only illustrates just this thought, that relief can be gained by a change

of business, and by the change of climate, thereby causing a restoration of the tone of the nervous system, and if we would bear this in mind, we could relieve many of our cases in this way.

DR. WOODYATT: Did the galvanism improve that man?

DR. HOUGHTON: It has improved him so much that he does not care to spend any more money for treatment in using it. I applied the electrode to the throat, and also to the ear, so as to include portions of the sympathetic and cerebro-spinal systems.

DR. WILSON: There are two or three questions I would like to ask in this connection. How far do the conditions of the mind effect the tinnitus aurium in these cases? Is it not the intense application of the mind to business that causes the tinnitus? Do you not find in these cases of aural catarrh that the tinnitus is very greatly increased in a depressed, nervous condition, and hence you find that in many of these cases, a change of business and an entire relief of the mind, helps largely to reduce the particular feature of the case?

DR. WOODYATT: Was it so in the case that you described?

DR. WILSON: Not in that case, but in the general class of cases; that is, that you find that many cases you put down as pure aural catarrh are of this nature which we have been discussing, or these conditions are found as a nervous complication of the disease. The other point is, that I notice these patients are unpleasantly affected and the disease perpetuated by the habit of saturating the head with water, especially with men, on getting up in the morning, and two or three times a day wetting the hair thoroughly, combing it, and leaving the moisture to evaporate. I believe I have found it necessary to entirely prohibit the use of cold applications about the head. I would like to know if my views in that respect coincide with others. It seems to me it is a point we always need to guard in the treatment of these catarrhal conditions, especially those of which we are now speaking.

DR. HOUGHTON: I have found these cases again and again, and when I question patients of this character, my first interrogatory is, What do you use as an application to your hair? If they say we every morning bathe the head and saturate the hair, comb it out, and leave it to dry, I always insist upon their ceasing to do so, and I have seen marked relief in numbers of cases. One young man was entirely restored. I think, however, we may find, and do find, cases where, with all our methods of examination, by inspection of the throat, and of the tympanic membrane, by inspection with Siegle's speculum, and by the use of the diagnostic tube, with all our means of judging the condition of the tympanic membrane, in spite of everything

we can do for the subjective symptoms, they are not relieved at all; then some change comes which is necessary to the mind as well as the body, that has been under such a tremendous pressure, and the change is followed by a marked, often a permanent, relief. I know case after case of men who are in various lines of business, professional and mercantile, who, in my opinion, will never be relieved from these things until they correct their business habits. Gentlemen, is there anything else on this point?

DR. E. V. VAN NORMAN: I wish to ask the question, if the nasal douche has not a great deal to do with our aural catarrh? I would like to hear the voice of some specialist on this point.

DR. HOUGHTON: By reference to Dr. Roosa's work, you will find a summary of the whole subject. His is the last and best work in the old school. He has done a good work for the profession in general. I consider it one of the most mischievous instruments that was ever invented, when placed in the hands of careless people.

DR. VAN NORMAN: The reason I ask is this: we have prescribed almost everything for nasal catarrh, and by means of that instrument we have a series of difficulties arise of which we know nothing; this is being sent through the country and thrust on the people, which is a great wrong, I think.

DR. HOUGHTON: Yes, sir; that is my view of it.

DR. WOODYATT: While the subject is up, and since the matter has been referred to, there may be some qualifications made. I do not think any subject of that kind bears extreme expression on one side or the other. The nasal douche is used on the contrary in this country, and used a great many times, without doing any harm, and occasionally used where it does harm. To say the nasal douche is a most dangerous instrument would be putting it in the extreme, in my opinion. To say it cannot be used with safety, I think, is putting it in the extreme. There are certain rules to be observed which do to a great extent remove the danger. These may be briefly stated to be, by using the water warm, and breathing through the mouth, taking care not to swallow while it is being used; these are very simple. There are some cases, even while these rules are observed, that will be affected by acute inflammation of the middle ear after they have used it. It is only the possibility that may arise that I think ought to be guarded against. There are other ways, I think, better for both cleansing and medicating the nasal passages than by the use of the nasal douche. While I do not speak in wholesale denunciation of it, I do not think it ought to be used in every case.

DR. HOUGHTON: My remark was intended, when I used the word "mischievous," to express the fact that in the hands of

persons who do not understand the relation of the nasal passages, the Eustachian tubes, and the middle ear, persistent use demonstrates that it is a mischievous instrument. To illustrate why I use such strong terms, it was only just before coming to this meeting of the Institute that I had two cases, both intelligent people, who ought to recognize cause and effect. In one there was started an inflammation of the drum of one ear, and after I told her decidedly that the douche was the most pernicious thing she could use, she persisted in the use of it on account of the relief of the catarrh until it produced inflammation, and it was only when driven to the point of performing paracentesis to relieve the tension that she yielded.

I passed the pamphlet published by Professor Roosa into the hands of a young lady, a patient of mine, who gave it to two persons who were using the douche, one a relative of hers who had already produced all these premonitory symptoms of aural catarrh, such as a feeling of fulness in the ear, with dulness of hearing, and when she read the paper she became convinced of the fact that she was on the verge of actual danger, and only the reading of Professor Roosa's pamphlet opened her eyes to the fact. That is the reason I use such strong terms.

DR. WILSON: I am prone to take extreme views upon subjects. I do certainly upon this one. I do not consider the danger is measured by the evil results; danger exists without any unpleasant consequences, but the danger is there, and I do say most emphatically, that the nasal douche can never be used with safety. That it is used without harm does not militate against that statement at all, but I do believe that it is one of the most unscientific instruments that has ever been introduced into the medical profession, and that as conservators of the public health we ought to take a bold ground upon this thing, and declare absolutely and unequivocally that every time that it is used there is absolute danger, though it may fortunately be escaped. The instrument was never invented with a correct understanding of the anatomy of the parts, and I presume that Dr. Woodyatt does not himself employ it, or recommend it; and I think that the true line of policy due to us as scientists, and in view of the knowledge that we profess to have of the functions and anatomy of the parts, is to say that it is a thing to be wholly and entirely discarded, because no good can come from its use that cannot be reached in a way of much greater safety, if not of absolute safety; so I would like to take a little stronger ground than my friend Dr. Woodyatt has taken upon that subject.

DR. HOUGHTON: Anything more with regard to the catarrhal inflammation of the middle ear?

DR. VAN NORMAN: I would like to ask another question, that is, in regard to the use of the Politzer and the Eustachian catheter.

Is there not as much danger of rupturing the membrana tympani in using the Eustachian catheter as there is with the use of the Politzer?

DR. WOODYATT: The paper read by me was not mine; it was Dr. Guernsey's. He said the subject appeared to be passed over; if the membrana tympani were ruptured in that way it would heal very quickly. I do not think there is very much danger myself of rupturing the drum-head with the Politzer. It requires a man with a strong grasp and a good deal of nerve to force the air in with power sufficient to rupture the drum-head. I think one is more likely to drive the patient away than to do positive harm. I think the main source of trouble is, that it is used too frequently and too prolonged, causing a flabby condition of the drum-head. If this subject is concluded, I would like to hear Dr. Norton's paper considered.

DR. HOUGHTON: Are there any further remarks on catarrh of the middle ear?

DR. VAN NORMAN: I would like to ask if there is any danger of inoculation of the patient in the use of the Eustachian catheter?

DR. HOUGHTON: That is a pertinent question. In answer to it I would simply say, in my own practice I have a catheter for the special benefit of the syphilitic patient. I do not think we are authorized in using instruments upon any patient that has ever been used about the throat, or nares, or Eustachian tube of a syphilitic patient. I am not fastidious about some matters, but I am about the cleanliness of my instruments, so as to prevent the transmission of any affecting virus, and I use a great deal of chlorine water.

DR. VAN NORMAN: In specific virus, if the tube is used in one case where there is a catarrhal difficulty, I believe the greatest possible care should be exercised in this respect.

DR. HOUGHTON: I think it very likely to transfer virus, and to hasten the extension of the disease.

DR. VAN NORMAN: That is what I wish not to do in specific virus.

DR. HOUGHTON: I think we are apt to promote and extend these diseases of the throat, if we are not very careful in the use of our instruments. When we find them covered with a mass of fetid pus, they should be taken and thoroughly cleansed, so that they are perfectly free from any odor.

DR. WILSON: I think there is another point in this connec-

tion, and that is the use of the Politzer. We make use of sudden compression, and when we withdraw the nose-piece, the pus is likely to draw into the opening, and thus extend the disease; therefore I have felt the necessity of taking the Politzer, and thoroughly cleansing it before I used it upon another patient, and I have sometimes been a little alarmed at my heedlessness in using it successively on different parties without cleansing it thoroughly. I think that much harm has been done in that way, propagating disease from one nostril to another.

DR. WOODYATT: Excuse my suggesting a very simple remedy for that. I hope that it will not be taken unkindly, but the matter may be remedied by making a hole in the body of the bag, over which you can squeeze your finger as you press, and then, while you are still pressing the bag, you can cleanse the tip. The means I take to remedy the trouble is, I generally sit with a towel across my knees in front of the patient, and operate in that way. I inflate the air-bag, throw in the air, and at once wipe the end of the instrument. It does not do away with the necessity of washing, but it prevents mucus or pus from being sent back into the nares by the next current of air.

DR. HOUGHTON: My own habit has been to use the air-bag with a hole, and I found that the air would not escape into the valve aperture as rapidly as it would into the nose-tip, so I was careful not to release my hold of the bag until, after the operation, I took it and washed it perfectly, drawing a little water through it so as to see that the tube was clear. There is another suggestion: our sight often aids us in our operations. I think a close inspection is often profitable; and if you see anything faulty about the tube do not use it; for this reason, the transparent glass tube is much better than a hard rubber; they cost but a trifle, and you can change them very frequently.

If there is nothing more to say on this paper, we will take up, in accordance with Dr. Woodyatt's request, the paper of Dr. Norton on "Secondary Glaucoma from Ribbon-shaped Opacity of the Cornea."

DR. WOODYATT: I called it up without any intention of hurrying over the discussion, but took advantage of the first let up to hurry along. I think there is something very peculiar about this condition. I remember reading the case referred to a long time ago, but it reminded me when heard it this time, as it never did before, how particularly strong a likeness there is between that particular account of the case and some cases which I have seen since, following cerebro-spinal meningitis, in which it is supposed to have originated in the choroid. The symptoms of this disease, by the time it falls into our hands as specialists, are

generally these: We find on the cornea, in three or four places, a peculiar opacity, extending from the inner and outer canthi, leaving the middle clear. We find the iris contracted, and in many cases bound down to the lens. If the case is allowed to run on, glaucomatous symptoms appear, and we have secondary glaucoma, with which we have corneal opacity and disease of the iris. Some have thought it was simply a condition which bears no arbitrary classification, as it comes from some cause not yet fully explained. It is a disease which may extend from the cornea to the iris, and thence to the choroid and back to the nerve, giving us a glaucomatous condition, with atrophy of the optic nerve; or it may originate in the choroid and come forward to the iris, and then attack the cornea; in fact, may begin and end anywhere, until the whole globe is involved. I have been in the habit of classifying these cases as irido-choroiditis, and I think if I had seen the peculiar ribbon-shaped opacity, with glaucomatous symptoms, without any such notice as that of Von Græfe, I should have called the case one of irido-choroiditis, with glaucoma. We certainly do find that when cases come to us with these peculiar spots on the cornea, the iris a good deal discolored, and with strong adhesions between the anterior capsule and the iris, Belladonna will do a great deal of good by diminishing the congestion. In one case of this kind, in which I gave Silicea, there was a perfect cure in about three months, although the patient lived some miles from me in one of the neighboring towns, and I could see her only occasionally.

I think that we are wise to treat these cases medicinally. It has been my practice to tell my patients that an operation will cost so much, and treatment so much, and give them the opportunity of choosing which they will have. I have been highly pleased with the results of the medical treatment, and would have been satisfied if such results had followed operation. One case I remember went on for some time; the boy was subject to relapses from different exciting causes, the same as any patient recovering from cerebro-spinal meningitis. I only saw him occasionally, but he was taking medicine during the intervals pursuant to my suggestions. He was under the influence of Belladonna and Silicea when the vision improved and returned to what it was before the attack. He then had another relapse, but this time the tension became much increased, showing that there was a glaucomatous tendency.

DR. HOUGHTON: I would like to ask the Doctor if, in these cases of secondary glaucoma and cerebro-spinal meningitis, he has noticed a marked alteration of the general motor tract, and whether it could depend on malnutrition?

DR. WOODYATT: No. I have seen children sometimes, who are exceedingly strong and hearty, with a glaucomatous condition of the eye. I saw a patient in this condition some time since, but at this time his father had been strongly urged to take him to another surgeon, who operated upon him. The operation stopped the disease where it was; but since then he has had two relapses, and had to take medicine. So the case remains in that way.

Another case similar to the foregoing came to my knowledge, having this peculiar appearance of the eye: Large spots, two lines in diameter, not circular, but from two to two and a half lines one way and two lines the other, irregularly scattered around the cornea, while the epithelium covering them was perfectly smooth, having an appearance quite different from actual opacities of the cornea which are the result of corneal disease. I report this merely because it may throw some light upon the subject.

DR. NORTON: There is a point concerning this disease which I was just thinking about, and will mention, and that is regarding these ribbon-shaped opacities of the cornea; for, as is well known, these are often seen not associated with any glaucomatous symptoms. Now why cannot this opacity of the cornea be a kind of parenchymatous keratitis? We often see cases of this form of keratitis, where there is only slight pericorneal injection, and also when the opacity of the cornea takes various forms. We know that as a general thing it seems to be thicker at one portion of the cornea, sometimes at the centre, and sometimes at the periphery. Now why cannot this affection we are discussing be some such kind of corneal trouble? The manner of extension of this disease from the cornea to the iris, has, I think, never been definitely settled, but it does often seem to involve the whole uveal tract, extending first to the iris, and from thence to the choroid, producing irido-choroiditis, as a result of which we obtain posterior synechiæ, and this has caused secondary glaucoma oftener than almost any other disease. Therefore the disease commencing in the cornea seems to run a perfect course, and we can trace it through each stage till the glaucomatous symptoms at last appear.

DR. WOODYATT: I did not know that that link had not been supplied. I supposed it was supplied, and supplied very clearly, from the fact that the membrane of Descement which joins the surfaces is merely a continued surface running over the posterior surface of the cornea and the anterior surface of the iris.

DR. NORTON: If the membrane of Descement is involved, then of course it is very plain how this disease extends from the

cornea to the iris, but the way I understood it was, that the trouble was seated in the parenchyma proper of the cornea, and not in the posterior elastic layer.

DR. HOUGHTON: Is there any other point on this subject? I am free to confess my ignorance on the subject clinically, but I am interested in the pathology of the disease, and to illustrate: Take the relation of these tissues to the nervous system; do we not get the real seat of the difficulty, lying back somewhere in the nerve centres which supply these tissues of the eye? It is a curious fact, according to the statement of all the cases, so far as I have listened to them, that the most anterior terminal points are first involved. My question was in that direction. Do we not see diseases of this kind springing up, for instance, after cerebro-spinal meningitis, and in other similar diseases of the spinal cord, particularly where injury is claimed?

What paper will you take up now, gentlemen, or will you take up any? If not, I would like, if there is nothing to be said on other papers, to have some remarks on Dr. Liebold's paper. That commends itself directly to us. There is one thing I would like to refer to, and then the general subject for discussion can be taken up next year, and that is with regard to the use of Iodide of Baryta. You will find it of value no doubt, as I have, in connection with your aural experience. I tried the muriate and carbonate as indicated by our repertories with no satisfaction, but we have tried the salt commended by Dr. Liebold, and have had some excellent results from it. I have been using the Iodide of Baryta ever since for certain throat conditions, particularly in all hypertrophies of the glandular tissues, both internal and external, of the throat and neck. The hypertrophied tissue has been greatly reduced by its use. I have usually given the second trituration, following it afterward by the thirtieth with good results.

DR. WOODYATT: I would like to have the matter of retinitis Brightii discussed, if that is the feeling of the meeting.

DR. HOUGHTON: I think it would be an interesting subject to bring before the meeting.

DR. WOODYATT: Dr. Wilson's paper takes the same ground that has been taken by nearly every writer on the subject, but I think the matter has not been very fully understood; all the facts connected with it should be collected, and all the evidence should be got together on the different points, and that there are certain points to be added are evident; as, for instance, whether the kidneys, the heart, or the brain is the seat of the trouble primarily, and what the relation is between them. On these points I would say that my opinion is not well settled. There

are, however, some practical points about the disease itself which are worthy of mentioning here.

We have retinitis Brightii, occurring after the disease of the kidney has been well established. We have it appearing almost simultaneously with other symptoms in the body that indicate Bright's disease, and we have it coming even before all the others. Why it should is not clearly stated. But there is one point clearly known about it, that when you do find the retinitis Brightii, you may predict, with almost positive certainty, that you have disease of the kidney. I take that ground, although there will be those who will take the opposite. But I think the bulk of evidence is in favor of that position. The Doctor has given the symptoms and ophthalmoscopic appearance of well-marked cases, and I believe those symptoms are very valuable indeed, but to gain a complete knowledge of this disease requires the very greatest study of the subject that one can get. I was called upon by a young man of some intelligence, who wanted to know the cause of a sick headache that was always troubling him. "Nothing in the world but headache," he said. I thought the cause might be revealed by the ophthalmoscope, so I examined the eye carefully, and what I did find was this: The surface of the disk was nearly normal, no swelling, no infiltration, a pinkish injection of the inner side, but the outlines were very sharply defined. I noted it carefully. The veins were large and tortuous, but they were also large in the other eye, so I did not consider them out of proportion. The arteries were not diminished. Just outside of the disk I saw three small, decidedly atrophic spots in the retina. Tracing the larger veins downward I noticed that there were three or four little white streaks, which were undoubtedly degenerated fibres. I told him to bring me a specimen of his urine next time he came. He did this, and I found evidence of the presence of albumen and casts. I don't know any more of the case, as that was the last time I saw him. The point I wish to bring up is, that the general symptoms are variable, and that the atrophic spots are not due to hemorrhage. The next point is the occurrence of this disease in connection with pregnant women. I saw one case when in Brooklyn. We find this disease of the eye occurring in pregnant women with well-marked changes. My opinion is this: That when we do find it there, it is then due to amyloid degeneration of the kidney; that the prognosis is a good deal better than it is in the other form; that the sight is very seldom, if ever, totally lost; and that the periphery, or outside of the field of vision, is nearly always retained. I am speaking now of the retinitis of pregnancy. Another point is, that in this form the sight will not depend on

the amount of deposit that has taken place in the nerve-tubules of the retina, nor to its effect upon those nerve-tubules, although that may be very important to the patient, when there is a marked deposit and exudation. That it is difficult to form a prognosis as to the conditions of the nerve-tubules, and so make out a satisfactory prognosis, I have found in a number of cases. But this difficulty is cleared up to a certain extent when we know the general condition of the kidney, for we know that often in a few years the sight may be improved, if not almost entirely restored.

DR. WILSON: Spontaneously?

DR. WOODYATT: By the administration of medicine, I should have said.

DR. HOUGHTON: Will you make the motion that this subject be the one for our consideration and discussion for another year, and that the papers be upon it?

DR. WOODYATT: I think that course would be of great value to the Institute next year, because we shall have additional evidence of very great value to general practitioners, and be able to render them such service as comes within our sphere as regards both instrumental and medicinal means.

DR. HOUGHTON: It would be well to settle that question now.

Resolved, That "Retinitis Brightii" be the subject for our consideration during the next annual session.

DR. WOODYATT: I would like to suggest the addition of atrophy of the optic nerve from neuritis, for the reason that it brings the subject of nervous diseases up before the profession.

Agreed to.

DR. WILSON: I make the motion that the otiological branch of the bureau take up the subject of "Suppurative Inflammation of the Middle Ear."

DR. NORTON: I second the motion.

Agreed to.

DR. HOUGHTON: The suppurative, naturally following the non-suppurative, it would seem to me well to take suppurative inflammation next.

DR. WOODYATT: That is the idea I had.

DR. HOUGHTON: Everything, then, comes right on, in anatomical and pathological order.

DR. WOODYATT: We ought to go away with it all arranged.

DR. NORTON: If not out of order, I should like to speak on this subject of retinitis Brightii. It is one that has interested me a good deal, having had several cases of it. I will only speak briefly on this subject. Dr. Woodyatt has alluded to the con-

nection between the kidney, the eye, and the brain in retinitis Brightii. It was only a short time ago that I had a case which illustrates this point very nicely. It was this: A man, twenty-five years of age, came to me some time ago to be treated for syphilis. I treated him for about a year, with gradual improvement of all his constitutional symptoms. At about this time he began to complain of some trouble with his right eye. He could not see well in the distance, and also print was very dim, so that he could not read the papers. The sight of his left eye had been lost for years. I now made an ophthalmoscopic examination of both eyes, and found in the left total white atrophy of the optic nerve. In the right eye (the one last complained of) there was some atrophy of the nerve, the disk appearing lighter than normal, arteries diminished in size, but veins about normal, though a little tortuous in spots; while along the course of some of them could be distinguished the white patches indicative of fatty degeneration of the retina, and also some three or four small retinal hemorrhages in its innermost layers, as shown by their striated appearance. But in the macula lutea the chief diagnostic point was found, namely, the white stellate figures so characteristic of this disease. From this examination of his eye, for he had no other symptom that would lead one to suspect Bright's disease, I asked him to bring me a little of his urine when he next came. He did so, and upon examination both albumen and casts were found. I gave him remedies adapted to this condition, and his vision seemed to improve, so he thought. Some two or three weeks afterward, as he was returning home from business, and near his house, he was attacked with a severe, sharp pain in the right side of the head, and fell to the ground unconscious. (He had had similar pains before.) He was immediately taken into the house, and I sent for, but when I arrived, twenty minutes after, found he had been dead some five minutes. Upon the next day, Dr. St. Clair Smith and I held a post-mortem. The brain was found apparently healthy, except in the region of the right lateral ventricle, which was filled with a clot of blood the size of a hen's egg. The surrounding brain-substance was also found soft and degenerated, showing that a diseased condition had been present for some time, until at last it had involved a larger vessel, which had burst, and so formed the above clot which produced death. The kidneys were extensively degenerated, as is usually found in well-advanced Bright's disease. We were unable to obtain the eye for examination.

DR. HOUGHTON: If there is no other subject to consider, we will close the bureau.

On motion, adjourned.

SECTION X.

REPORT

OF THE

BUREAU OF MEDICAL LITERATURE,

S. LILIENTHAL, M.D., ... New York.
S. A. JONES, M.D., ... New York.
GEORGE E. SHIPMAN, M.D., ... Chicago.

TO THE

TWENTY-SEVENTH SESSION

OF THE

American Institute of Homœopathy.

VOLUME I. NUMBER 2.

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III.

REPORT OF THE BUREAU OF MEDICAL LITERATURE FOR 1873.

By S Lilienthal, M.D., New York.

In looking over the medical literature which appeared during the year 1873, we are astonished and pleased at the progress made in its different branches. In Medical Physics and Chemistry, the process of fermentation in general, and of respiration in particular, were favorite subjects of study (Douglas, Hamel, Lender, Adf. Mayer, Paschutin, Salkowski). In Botany, W. Ahles gives us a splendid folio work with plates, on the rust of cereals, and on the diseases peculiar to grapes and potatoes. In Anatomy, Darwin's theory falls on fruitful ground, and the doctrine of descendency in diseases, as well as the generatio æquivoca, finds many a stout defender (Pettigrew, Bell, Oscar Schmitt, etc.). Psychology and Mental Alienation was enriched by the labors of Krafft, Ebbing, Wunt, Maudsley, Tuke, Baillarger, Berthier, Bucknell, Zenker, etc. Braune enriched medical literature by his work on the venous system. The functions of the cerebral convolutions gave opportunity to many experiments published in pamphlets and reviews (the brothers Cyon, Nothnagel, Maynert, Kitchen, Parker, Simon). The application of electricity to nervous disorders found close students and strenuous advocates in Benedict, Fieber, Neftel, Westphal, etc.; in fact the study of the nervous system, physiologically as well as pathologically, is now a favorite branch, and the advancements thus far

made allow of high expectations for the future. Diphtheria and cholera flooded the literary market with ephemeral publications, but in looking them over, we frequently observe a more rational treatment taking the place of former pseudo-heroic remedies. Surgery, obstetrics, gynæcology, forensic medicine, one and all contributed their full share into the general treasury of medical lore, and *the old school may well be proud of its disciples.*

Among the eclectic schools, that of Cincinnati takes the front rank. J. M. Scudder's *Eclectic Medical Journal* always contains many readable and even valuable articles, and during last year that untiring worker published "Specific Medication" and "On the Venereal;" works showing close study of the subjects he treats of, and, being concise, they are just the manuals which that school can recommend to its students. Professor Howe, of the same college, has just published *A Manual of Eye-surgery*, and we do not doubt that it will take as high a rank in the literature of that school as his treatise on *Fractures and Dislocations*, a subject on which, after all, the work of Hamilton will remain the standard authority.

After these few preliminary remarks we come now to our own school. In a very intricate case a physician of our school made out the difficult diagnosis. A high allopathic authority, who had been called in consultation, was astonished and pleased at the confirmation of his diagnosis made out by a homœopathist, for he thought that therapeutics and only therapeutics were the Alpha and Omega of the homœopathic school. Now, my brethren, how long shall this stigma rest upon us? Ask yourselves, one and all, what have you done the last year, what are you doing now, for the advancement of medical art and science in general, and particularly for the advancement of homœopathic literature, of homœopathic therapeutics? Hausmann, in his lectures on homœopathy (*Internationale Presse*, iv, 200), remarks, with so much truth, that too many physicians of our school consider homœopathy only a therapeutic art based on provings and ex usu in morbis, whereas it ought also to be studied and practiced as a pathological science, a science which teaches us to cure diseases on the basis of a natural law. "Homœopathy," he remarks, "is essentially a pathological sci-

ence, as it requires from us the most exact observation of the totality of those symptoms which any drug produces on the organism, and these artificial diseases will always find their likeness in some natural diseases." Hahnemann was the discoverer of artificial diseases, and he taught us to consider the totality of symptoms produced by any medicinal substance as a unity, and apply such a drug in a given case which offers us in its unity a similar picture.

We thus can appreciate what a large field is open to us in the study and application of the homœopathic doctrine, and it really ought to spur us on to constant labor and investigations, when we see how gradually and, perhaps, unintentionally the other schools are forced to acknowledge the great law of nature, promulgated nearly a century ago by Samuel Hahnemann. Examine the works on Materia Medica published of late by Binz, Nothnagel, Ringer, Burness, etc., and you find the physiological action of the drug on man and animals closely studied, and made of great value to the observing physician. Examine their physiological experiments, as the division of the trigeminus, of the vagi, and it necessarily leads you to the conclusion that such experiments produced the same diseases artificially as we find them from natural causes. The Phosphor-necrosis, the Secale-gangrene, and many more, are too well known to need more than a mere mention. The time has passed when any physician, no matter to what school he belongs, can rest satisfied with the mere fact of giving a remedy and noting its effect. From long experience we all have learned that post hoc is not always propter hoc, and even if it remains impossible for the human mind to reach the ultima thule, to find out everywhere cause and effect, it still will always remain our duty to search for the explanation of facts as they present themselves to us, and just as physiology has already been declared the handmaid of pathology, so the time will come, must come, when artificial and so-called natural diseases will be acknowledged as similar processes, and the science and art of homœopathy declared as the only scientific pathological therapia.

But, *revenons a notre mouton!* to homœopathic literature during the last year. Have the periodicals of our school come up to the standard that we have a right to expect them to do?

It is with unfeigned pleasure that we can only bestow praise on our Western quarterly. The clinical lectures found in the eighth volume of the *United States M. and S. Journal* are alone worth far more than the price charged for it by the publishers, and, in fact, every number teems with practical articles. The pages of the twenty-second volume of the *North American Journal of Homœopathy*, our Eastern quarterly, are enriched by original and translated contributions of some of the best writers of the different schools, and its editor aims to give in every number, not only the cream of European medical literature, but the contributions of our own members, which always find there a hearty welcome, and, whenever necessary, a free field for discussion.

Our old friend, *The American Observer*, has finished its first decade, and boasts of the largest number of subscribers. Its claim to favor rests on its catholic medical character, and it culls the good things wherever they may be found. Among its contributors are some spicy writers, and thus a genuine olla podrida is set monthly before its host of readers.

The *Chicago Investigator* investigates everything in homœopathy, in concise and terse articles, with a strong leaning to pure, undefiled Hahnemannism. It is our valuable diary (*sit venia verbo*), and, in its special department, its old editor (though still young in years), and his co-laborers are always ready to respond to any queries set before them. Fight on, friend Duncan, the good fight for pure homœopathy; there is great need for this work you and your noble band are engaged in; the hydraheaded monster of mongrelism has still too many adherents among the practitioners of our school, who forget too easily that liberty of thought and action is no excuse for licentiousness in practice.

There is still another Western monthly, the *Cincinnati Medical Advance*, asking for your support. The pet idea of its editors is, that "medical science in teaching and practice has fallen into a rut that is narrow and deep; no higher mission can be undertaken than to redeem medical science from this condition of misapprehension and abuse. Clothe it in its own beauty, purge it of superstition and ignorant fancy, let it stand forth in its own truthfulness and simplicity." Editor Wilson, you

choose a hard road to travel, but in your journey remember that we live in a positive world, and that practice is frequently harder, but always of more value than mere preaching.

From Cleveland we have the *Ohio Medical and Surgical Reporter*, published every two months. Under its new management it deserves to thrive, presenting, as it generally does, some valuable material with each issue. A little more care on the part of the editor would guard against the numerous typographical errors which detract from its beauty and its worth.

Coming eastward, Philadelphia sends you a double greeting. The faculty of the Hahnemann Medical College publishes every month the *American Journal of Homœopathic Materia Medica and Record of Medical Science.* What a big name and what a misnomer for volume vi of that journal, which contains neither a proving nor a pathogenesis of a drug! In volume vii, Farrington gives us the beginning of his comparative Materia Medica. Every encouragement ought to be held out to this young and promising physician, and we are glad that he is allowed to gather from the vast storehouse of Hering. It is a most practical work—needing an extensive index for practical use—and the more it is studied, the more benefit will we reap from its perusal.

Our old and tried friend, McClatchey, who is also our able and willing secretary, goes on in the even tenor of his way, and the *Hahnemannian Monthly*, which he edits, has long ago passed the ordeal of time, and fears neither competition nor criticism. Appendices seem to be just now the fashion in periodical literature, and as the editor apparently felt itchy, he has added a few pages on "Cutaneous Diseases" to every monthly issue.

We had nearly forgotten our New York journals, their foolish quarrels between colleges and State board. So far nobody has been hurt, but youth and inexperience must be taken as an excuse, and as they grow older they will grow wiser. We already see a vast improvement in the *Medical Union*, as well as in the *New York Journal*, and we trust that they will soon occupy that place, which the "Excelsior" State has a right to expect from its children.

Does journalism pay? Perhaps that is none of our business

(we believe in the eleventh commandment), but let every physician ask himself the question, whether he has done his duty in subscribing and paying for several journals. Show me a good, practical, working physician, and I will take my oath on it, that his table is loaded with the periodicals of different schools; for experience teaches, that progress can only be gained by the diligent perusal of periodical literature; and he who does not progress may be sure of retrogression.

Passing in review the books which appeared during 1873, we notice, first, C. Hering's *Materia Medica*, with a pathological index, vol. i. There is the rub,—the first and so far only volume! When will the succeeding volumes enrich our libraries? When may we look for the publication of the valuable gatherings of fifty years? It ought to be done during the lifetime of our venerable friend; and the rapidity with which the first volume is bought up, ought to encourage Father Hering not to hold back now, but to publish volume after volume till his treasury is emptied. As Hering's *Materia Medica* does not appear in alphabetical order, it cannot and does not interfere with the publication of any other work on homœopathic Materia Medica. Is there a chance for the appearance of another work on Materia Medica? The enterprising publishers, Messrs. Bœricke & Tafel, ask this question, and it remains for the members of our school to answer it promptly. They certainly had a right to expect a more prompt reply from the teeming West. The splendid and exhaustive pathogenesis of Aconite has been sown broadcast over the land as a sample; what a work we might expect if the necessary support is given by the profession to this expensive undertaking! Professor T. F. Allen has already spent a nice little fortune in the accumulation of sources from whence to draw his supplies; the medical granaries of all nations were called upon to offer their contingents; unceasing labor for months was necessary to prepare such an encyclopædia for the press, and the first few letters of the alphabet are finished and ready for the printer. Will you partake of the feast? We are gathered here in goodly numbers to honor homœopathy; let us honor ourselves by subscribing cheerfully to Hering's *Materia Medica*, and to Allen's

Encyclopœdia, and prove thus to the world that *America may truly be called the home of Homœopathy.*

H. N. Guernsey's second and enlarged edition of his *Obstetrics* deserves more than a mere passing notice. In the obstetrical part of the work the operative section has been entirely rewritten, evidently by a strong and skilful hand, and shows a great improvement over the first edition. In fact we consider the first edition of any work as a kind of feeler, and whenever a favorable reply is received, the author then puts forth his strength *con amore*, and we may expect an improved second edition. In fact Guernsey has given us nearly a new work, but holds firmly to some ideas of his own. The disorders peculiar to women and the diseases of infants and young children are treated in a masterly manner, and deserve, though they do not need it, our most earnest recommendation, but—"mach's nach, mach's aber recht nach."

Franklin and Helmuth, two as eminent surgeons as any school can boast of, deserve the thanks of the Institute for having taken from our school the stigma that surgery is foreign and a terra incognita to our practitioners. Their respective works on "Surgery" have been favorably received by the profession at large, especially as conservative surgery, the glory of our century, finds such valuable aid in the suitable application of our remedies. Thus these surgical works find a fit supplement in Gilchrist's *Homœopathic Treatment of Surgical Diseases.* These three publications on surgery ought to be household works in the library of every physician, so that he may be able to administer to any accident or disease without calling outsiders to his assistance.

But people will die, and so Professor Thomas steps up to the desk, and gives us *A Practical Guide for making Post-mortem Examinations, and for the Study of Morbid Anatomy.* Morbid anatomy a text-book in homœopathic colleges! Even so, for we expect physicians of our school to be the equals of any physician, and though we trust that autopsies will be rare exceptions in our practice, still morbid anatomy teaches us the degenerations which must take place if the living anatomy is not taken care of.

The *Transactions of the American Institute of Homœopathy* are in the hands of every member, and we owe the Publication Committee, which we suspect to be our indefatigable Secretary, a decided vote of thanks for the promptness of their distribution. They contain many a good paper, but there is still some room for improvement.

Shall we preach a funeral oration on the *Transactions of the State of New York?* Allopathic jealousy stopped the publication by the State of *all* medical transactions, and it is a question for the physicians of that State to decide, whether a new series shall be published (the material being already on hand), or if the epitaph shall be written: "Died from atrophy of the pockets of New York physicians."

Of smaller works which appeared during last year by members of our school, Gorton's *Principles of Mental Hygiene* deserve more than a passing notice, for mind is the most important part of man. We hope that such a student of psychology as Gorton shows himself in this essay to be, will not stop short with this brochure, but that it will spur him on, and that he will enrich our literature by a new work on mental disease. Raue, Frost, Foote, Stiles, Worcester, why are you not up and doing? You made this beautiful branch of medical science your particular study; why allow our English friends to reap all the laurels? We want a homœopathic work on mental diseases, and on the diseases of the nervous system; you have the talent and the knowledge to give such works to us, and where there is a will there is also the power to do it.

Small, of Chicago, our former worthy President of the Institute, favored the profession with a small essay on the *Premature Decline of Manhood, and the Best Means of bringing about a Restoration to Health;* an evil which every practitioner nearly daily witnesses, and where mere hygienic treatment often fails. The pathology of this condition is given in a clear and concise style, but we miss individualizing indications for the use of remedies.

Hayward, of England, teaches *How taking Cold is the Cause of half our Diseases.* A well-written little book, but it is really like preaching to the wind. People will be careless, will catch cold,

even if they have to pay large doctor's fees as a punishment for their misdemeanors.

Multum in parvo! A good-sized volume of 541 pages, and not a bit too large. *Burt's Characteristic Materia Medica* shows us the wealth of our Materia Medica. Over five hundred pages filled only with symptoms, whose value has been proved at the bedside by the experience of our best physicians. Does such a work render Hering's *Materia Medica* or Allen's *Encyclopædia* superfluous? By no means, for many a case would remain uncured, if our whole knowledge of therapeutics consisted only of these keynotes and characteristics. Not that we undervalue such tested symptoms; but we fear, it keeps many a practitioner from studying up his cases more fully. Many of our remedies are really too much neglected, just because the drug is not mentioned in such otherwise excellent works as Hughes's *Pharmacodynamics* or Burt's *Characteristics*.

A fresh page in our Materia Medica has been opened by Higgins's *Ophidians*, a work still crude, but containing the essence of many a valuable hint. The animal kingdom in its most despised form offers us here its redeeming qualities, a balm for many an ill heretofore considered incurable. The curse which for centuries lingered around snakes and vipers will be taken away, and many a heartfelt prayer rise up to the throne of our Heavenly Father for the gifts which even the meanest of his created beings is able to bestow on mankind.

"With malice to none, with charity to all," the critic has to go to work. If I have tried to probe some of the sores from which our school still suffers, it has been done in that spirit which hopes that another year will see them as things of the past. Let us faithfully work for the improvement of our school, and the meetings of our beloved Institute will become more valuable from year to year.

SECTION XI.

REPORT

OF THE

BUREAU OF GYNÆCOLOGY,

S. R. BECKWITH, M.D., ... Cincinnati, O.
S. LILIENTHAL, M.D., ... New York.
R. B. RUSH, M.D., ... Salem, O.
CORNELIUS ORMES, M.D., ... Jamestown, N. Y.
WILLIS DANFORTH, M.D., ... Chicago.
M. FRIESE, M.D., ... Harrisburg, Pa.
W. H. HUNT, M.D., ... Covington, Ky.

TO THE

TWENTY-SEVENTH SESSION

OF THE

American Institute of Homœopathy.

VOLUME I. NUMBER 1.

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I.

POST-PARTUM UTERINE HEMORRHAGE.

By M. Friese, M.D., Harrisburg, Pa.

This accident may occur either before or after the expulsion of the placenta. It is the effect of three causes, viz., inertia of the uterus, irregular contraction of the uterine fibres, and morbid adhesion of the placenta. Remotely considered, however, this kind of hemorrhage may be traced to many causes, very few of which will come within the scope of this paper. I shall content myself with a limited view of the subject, taking in only what I consider of urgent practical value. Indeed it is not a condition that admits of much speculation, and especially not when standing at the bedside of a patient who is being exsanguined at such a fearful rate that a few minutes will suffice, if no relief is afforded, to place her *in articulo mortis*.

The primary form of post-partum hemorrhage, according to the books, is that which occurs at any time subsequent to the second stage of labor, and previous to the firm contraction of the uterus upon itself. The secondary variety, on the other hand, always presupposes a more or less firm contraction of the maternal organ having existed, and having again become relaxed from some cause or causes tending to produce such a result. I propose to examine briefly into some of the most prolific causes of after-hemorrhage, and at the same time point out such means of prevention and cure, as may suggest themselves to my mind. I may here remark, that I am aware of a difference of opinion existing between members of our school, with reference to the treatment of this variety of uterine hemorrhage. This difference of

opinion apparently grows out of a difference of pathological views; some holding that, as in ordinary uterine hemorrhage, it is only necessary to prescribe against a certain condition of the whole organism, which being removed the hemorrhage ceases; while others again contend, that after-hemorrhage is more of a traumatic than an idiopathic condition, and that it must be treated somewhat in the light of surgery, making use of such auxiliary means for the arrest of hemorrhage as may be found necessary. Without any design to conciliate either of these conflicting elements, or rather without a design to conciliate both of them by taking a between position, I am compelled to say, that I treat post-partum hemorrhage both as an idiopathic and a traumatic condition, making use of both general and local remedies. But whatever may be its pathology, it is certain that flooding after labor is very destructive to life. The reason of this tendency to fatality is at once apparent. During the process of utero-gestation, there is necessarily a great afflux of blood to the womb. This organ being within the space of a few hours divested of its contents, is left not only with the bloodvessels of its internal surface exposed, but is compelled at the same time to overcome the momentum of the circulation before existing. In view of these and other dangerous tendencies of after-hemorrhage, it is of great importance to obviate all causes and influences favoring the production of hemorrhage, the chances for prevention being much better than for cure. As to remote causes, it is certain that whatever interferes with the normal contractions of the uterus during parturition, may constitute a predisposing cause of after-hemorrhage. It is therefore necessary to observe closely the uterine contractions, in order to discover any defect or irregularity. For the purpose of obtaining such knowledge, as well as to facilitate contraction of the uterus, I have acted upon a suggestion published in *Braithwait's Retrospect of Practical Medicine and Surgery* some years ago. The writer advised the accoucheur to place his hand frequently over the fundus uteri during labor, making gentle pressure there, this manipulation to be repeated at suitable intervals, until the end of the second stage; then the hand to be again placed over the uterus, in order to learn whether it has contracted well upon the placenta.

By this means, it was argued, the uterus can be made to contract more vigorously, thus expediting labor, and at the same time preventing subsequent hemorrhage. I can say for this simple and by no means new procedure, that it is unquestionably a valuable auxiliary in securing firm uterine contractions, and hence must be serviceable against post-partum hemorrhage. In the May number of the *Hahnemannian Monthly* for 1874, I find the following on "Manual Compression of the Uterus." It is said that "this manipulation was first suggested by Crédé to expel the placenta, and then employed by Cristeller to aid the expulsive action of the uterus during labor. Travellers have reported the custom long common among uncivilized nations, such as Javanese. Dr. Lehman reports two cases in which the progress of parturition was arrested by the absence of uterine contractions. Firm pressure was applied from above downwards for thirty seconds, and repeated at intervals of two or three minutes, with the effect of completing the delivery after three or four repetitions of the procedure. The placentæ were expelled immediately after, and the uterus contracted normally. In atony of the uterus this treatment would seem to be very efficacious." At the risk of trespassing largely upon the domain of the obstetrical bureau, I will pursue this mechanical procedure yet a little further, hoping that in view of the object proposed to be attained (the prevention of after-hemorrhage), I may be excused for such intrusion.

Lawson Tait, Esq., Surgeon to the Birmingham Lying-in Charity and to the Hospital for Women, England, reports a case in which manual compression of the uterus seemed to prevent hemorrhage after labor. He says: "In September (1871) I was retained to attend Mrs. E., the mother of seven children. Her attendant informed me that nearly all her labors had been assisted by the forceps on account of an inert state of the uterus, and that in the last two she had nearly lost her life from post-partum hemorrhage. A few days before her confinement, the house was entered during the night by burglars, and she awoke to see one of them removing her husband's watch from the toilet-table. She was of course much excited, and in the morning I was asked to see her. We feared very much that the fright

would exercise an unfortunate influence, and so it proved, for symptoms of labor came on immediately.

"We tried by Opium and rest to delay it, and succeeded for a time. At last, however, it came on, and as before, the second stage was characterized by inertia. The pains were sufficiently strong to require anæsthesia, but whether it was continued or not, they did nothing. Instead of resorting to the forceps, as I originally intended, I employed the external pressure, and very soon had the head on the perineum. I then used the forceps to guide the head through the passages, still having the external pressure kept up. She recovered more rapidly and more completely than she had ever done, although she ascribed this to the chloroform. It is certain that she had no after-hemorrhage."

It will be observed that the drugs used in this case, viz., Opium and Chloroform, are rather favorable than otherwise to the production of after-hemorrhage; hence "the external pressure" made use of is entitled to a good degree of credit. Having made use of all the means in our power, mechanical and medicinal, to prevent hemorrhage, the dreaded ordeal coming on nevertheless, it is necessary to ascertain, first of all, what is the cause of the flow. Is it from retained placenta, and if so what is the cause of retention? If it be from irregular contraction of the uterine fibres, which is not, however, a very frequent cause of hemorrhage, such remedies as Belladonna, Pulsatilla, etc., may be sufficient to correct the abnormity.

Should the placenta be long retained, either with or without hemorrhage, the hand should be introduced in the usual way, and the offending body removed. Where the contractions are very firm, I am in the habit of administering sufficient chloroform to relax them. If morbid adhesion of the placenta should exist as a cause of hemorrhage, the exhibition of well-chosen remedies will of course be in order.

Jahr says, in his work on *Diseases of Females*, that "placental adhesions may give rise to violent uterine hemorrhages and inflammations if the placenta remains in the uterus, or is only partially detached; for this reason some accoucheurs advise to remove the placenta on any account, even in pieces, rather than leave it in the uterus. Under homœopathic treatment a few

globules of Pulsatilla or Belladonna will be sufficient to detach the placenta, or if necessary Secale and Pulsatilla may be administered."

I always administer such remedies as are recommended for placental adhesions, aiming at the most homœopathic in the case; but from some cause, known or unknown, I have never been able, in a single case, to overcome this difficulty with medicines alone. If the hemorrhage is great, I do not hesitate to introduce the hand, and carefully peel or pinch off the adherent portion of the placenta, then bringing it away under uterine contraction, together with any clots of blood which may have collected in utero. I do not, however, recommend to remove the placenta "on any account, even in pieces," as advised by the accoucheurs to whom Jahr refers, but to do it under the influence of an enlightened judgment. If there is no hemorrhage to compel us to act, we may conclude to wait for further developments, giving, at the same time, any medicament which is indicated, and if the placenta is so firmly adherent in patches that it cannot be detached without injury to the uterus, we may be obliged to choose between uterine inflammation on the one hand and secondary hemorrhage or septicæmia on the other. The question may arise here if, "under homœopathic treatment, a few globules of Pulsatilla or Secale will (not) suffice to detach the placenta," and if no other remedy will do it, the accoucheur being obliged to arrest the hemorrhage consequent upon the placental adhesion with mechanical force, is homœopathy thereby invalidated? I think not.

Mechanical power is one thing, therapeutic action another. Both are admitted within the pale of the healing art, and it is a question for the practitioner to decide when and how to apply them in a given case. But I go on to consider post-partum hemorrhage as produced by uterine inertia.

This condition of the uterus and its development has been so accurately described by Prof. Murphy, of London University College, England, that I quote his remarks in full. He says: "Inertia of the uterus is equally the cause and the effect of hemorrhage. You should be careful to recognize true inertia as soon as it presents itself; you may do so before any hemorrhage

takes place, even when the child is being expelled. The fundus of the uterus has not its usual firm feel under the hand; it seems spongy or like dough, and is larger than it ought to be, because it very seldom contracts to its full extent. After the delivery of the child, when the uterus generally remains contracted, it will not do so. You may have followed the contracting uterus with the hand, moderately compressing it, and in a short time it has eluded your grasp, and cannot be felt. Strong frictions over the lower part of the abdomen may again excite its action, but it is only for a moment—again it is lost. While this want of tone may be observed in the uterus, a corresponding amount of constitutional irritation may be noticed in the patient. The pulse is increased in frequency, and assumes the jerking hemorrhagic character; the patient is watchful and restless; complains of sinking, and does not experience that relief from her sufferings that is usual after delivery. All these symptoms may precede any hemorrhage, and should be carefully watched; they are the monitors of what is approaching. Hemorrhage generally begins with a slight draining from the vulva, just enough to soil the napkins that are applied, but in a short time, if no means for prevention are used, the stream rapidly increases to a torrent, deluging the bed, and forming a pool on the floor beneath. If the attendant is not on his guard this may be the first notice of danger, because the patient is sometimes too much exhausted to give any intimation of her condition; she lies on her side in a listless, dozy state; syncope may follow, and hemorrhage for a moment cease, but it soon returns with the pulse; a violent gush of blood places the patient at once 'in extremis;' a more prolonged syncope follows, from which she may never recover. Sometimes a fit of convulsions precedes dissolution." If this description of inertia uteri were well studied, and the knowledge so acquired applied in practice for the prevention of hemorrhage, I think it would result in good.

Professor Murphy says: "If the attendant is not on his guard this may be the first notice of danger." It is certainly very important to be on one's guard by way of the early recognition of inertia, to the end that suitable measures may be instituted for the prevention of its inevitable result, after-hemorrhage. If

hemorrhage occurs from uterine inertia, previous to the expulsion of the placenta, I have found the exhibition of Secale cornutum in quantity sufficient to produce its primary effect, together with pressure over the fundus uteri, and irritation of the os with the hand, to overcome some apparently bad cases. As soon as the uterus is felt to contract, the placenta is removed with the hand, and external pressure for a time kept up, the Secale being given at longer intervals than before. I am not unmindful of the fact that other medicaments, such as Belladonna, China, Chamomilla, Cinnamomum, Crocus, Ferrum, Ipecacuanha, Platina, Pulsatilla, Sabina, etc., may be necessary in the treatment of hemorrhage from uterine inertia. I have had some very happy effects from Ipecacuanha where much sickness of the stomach was present, with a discharge of bright red fluid blood from the uterus; also from the other remedies, given according to their several indications. If hemorrhage obtains subsequent to the expulsion of the placenta, and uterine atony be present, the same remedies may be required as for inertia with retained placenta. The presumption is, that where the accoucheur is present to watch the development of inertia, then not much hemorrhage will occur subsequent to the third stage of labor. It may occur, it is true, but if it should do so in the face of well-directed efforts to prevent it, a very serious condition of things would be indicated. Secondary post-partum hemorrhage fortunately is of rare occurrence, but it is perhaps on this account the more to be feared, the attendant either not being present, or not being on his guard to prevent its inception. A very instructive paper on this variety of after-hemorrhage was read before the Homœopathic Medical Society of Pennsylvania, during its sessions at Harrisburg, in 1873, by J. H. Marsden, M.D. The Doctor enumerates some of the most prominent causes of the hemorrhage, and gives some valuable hints concerning its treatment. I do not feel at liberty, however, to make any quotations from his paper, as he may favor the Institute with a copy of the same. As already intimated, the secondary form of after-hemorrhage is always characterized by inertia of the uterus. This condition may be produced by a variety of causes, mental as well as physical, and requires such remedies for its cure as have been

found beneficial in the arrest of hemorrhage immediately after labor.

In the further consideration of the treatment of post-partum hemorrhage, I can say that I have never been obliged to resort to the application of ice and cold water, or to the topical application of styptics to the uterine surface, for the purpose of arresting hemorrhage; but I am not prepared to say that on this account they must never be used.

Dr. Gooch speaks of a case where pounded ice applied over the abdomen failed to arrest the hemorrhage and contract the uterus, but cold water poured from the height of several feet on the abdomen answered the purpose. In my note-book of medical lectures delivered by Professor Isaac M. Ward, I find a case reported from his own practice, where after a quick labor the hemorrhage was fearful, the blood coming away in torrents with "clots as large as a child's head," which was arrested by him with cold water dashed over the abdomen. It is supposed by some accoucheurs that the nervous shock produced by dashing cold water on the abdomen has more to do with the arrest of hemorrhage than the temperature of the water, and hence they do not favor so much the application of ice. With reference to the use of styptics locally applied to the inner surface of the uterus, Dr. Robert Barnes, in a paper read before the Obstetrical Society of London, gives some information, concerning the value of which I have no practical knowledge. He says: "The remedies almost exclusively depended for their efficacy upon their power of contracting the uterus; this presupposed nerve force enough to respond to excitation, but when this was exhausted remedies failed. It became necessary to seek a new power that would act under the condition of exhausted contractility; this was found in styptics like perchloride of iron, which acted by coagulating the blood in the mouths of open vessels, and corrugating the inner surface of the uterus." Dr. Barnes used this styptic in solution by injection, but of what strength I am not aware. Dr. Wynne Williams, in the discussion which followed Dr. Barnes's paper, remarked that he "had used it (the perchloride of iron) for a long time, although not exactly in the same manner as the author of the paper, but in a way which he might call the ready

method; this consisted in taking a sponge, on which some of the tincture of the perchloride had been poured, and passing it into the uterus through the hollow of the hand already introduced, after of course previously emptying the uterus of clots, and then sponging the interior of the uterus with it, leaving it in the uterine cavity if seen fit with a string attached. He thought this plan less objectionable than injecting a considerable quantity of fluid. The stains on the hands of the operator were readily removed by a solution of oxalic acid or salts of lemon." For the purpose of restoring the "nerve force" spoken of by Dr. Barnes, it would appear that electricity should answer a good purpose. After the restoration of this force, the usual remedies should give a favorable response. It is scarcely necessary for me to say in this connection, that the tampon is not applicable in cases of after-hemorrhage at full term, but it has rendered me good service after abortion at two or three months. Here the uterus is not so large as to cause danger from internal hemorrhage, when the external flow is suddenly arrested. I think it would be unwise to lay this agent on the shelf altogether, in the treatment of uterine hemorrhage, else we might be obliged to take it down again if we would do our whole duty to our patients. In concluding what I have to say on the subject of post-partum hemorrhage at this time, I beg leave to report a few cases from my own practice; they are not extreme cases, as will be observed, yet they may be of some interest nevertheless.

CASE 1.—Mrs. M., aged about twenty-five, pregnant with first child, called me in the evening to attend her in labor. Her residence being several miles from my office, I took with me a pair of forceps and a small bottle of chloroform. On my arrival at her bedside, I found that the first stage of labor had commenced, and was advancing as rapidly as is usual for primiparæ. I remained in the house, occasionally visiting her room, during a period of four hours, at the end of which time the first stage was completed. I now watched her more closely, but nothing unusual was observed for a time, when suddenly she was seized with a violent convulsion, nearly throwing her off the bed. I was completely surprised by this occurrence, as she had not given any evidence of such a visitor. I immediately administered some of

the chloroform I had taken with me, and upon making the necessary examination, I found the labor sufficiently advanced to admit of the application of the forceps. I determined to deliver her in this way, and made the usual preparations for the operation. But before I was ready to apply the instruments, she had two more convulsions. I then delivered her while under the influence of chloroform without much difficulty. As soon, however, as the child was born, there was a copious discharge of blood, which very soon grew into a torrent. I cut the funis umbilicus as quickly as possible, and handed the child to the nurse. External pressure was made over the fundus uteri, and Secale cornutum was administered, but the hemorrhage continued, and my patient could neither see nor hear any more. I then introduced one hand into the uterus, grasping the placenta which was still lodged there, while with the other I pressed on the fundus externally, and very soon had the satisfaction of feeling the uterus contract over my hand, and expel it, together with the placenta which it inclosed. The hemorrhage ceased, and did not return. It is proper to say here that both the convulsions and after-hemorrhage were caused by a short umbilical cord. The patient made a good recovery, and the child did well.

CASE 2.—Mrs. L., pregnant with her seventh child. Had a tolerably easy labor, which was attended by some degree of sluggishness of the uterus. There was a kind of partial inertia, but not sufficient to do more than retard the labor. Her child was born by the natural efforts, and the placenta came away soon after. There was not much flow of blood, yet the uterus had not that "firm feel" which I like to see present. I left her, however, under the use of Secale repeated every half hour. I was sent for in two hours, and found my patient had flooded to a serious extent. Her symptoms were, extreme sickness of the stomach, with fainting, roaring in the ears, no pain in the uterus, but a discharge of bright red blood, all fluid. I looked in my case for Ipecacuanha, but could not find it. I then remembered having a vial of the thirtieth potency, pellets, in my vest-pocket, and very soon gave her a dose of it on her tongue. In a few minutes I repeated the dose. She immediately felt better, and

in a very short time the hemorrhage ceased, and did not return. She made a good recovery.

CASE 3.—Mrs. M. was delivered of her fifth child without any unusual occurrence, the labor being easy and rather quick. The placenta came away in the usual time, but she did not "feel right," as she termed it; was restless, and would frequently take a deep breath or inspiration, complained of some "after pains," but the uterus had not contracted fully. It was larger than usual, and not as solid as when fully contracted, but I had frequently seen a similar condition of the uterus existing without any hemorrhage supervening. In this case there was as yet no external hemorrhage. I gave her Secale, Pulsatilla, and Belladonna during the course of thirty minutes, without affording any relief, either for the local or constitutional symptoms. On the other hand, she grew rapidly worse, became faint, with ringing in the ears, her respiration being now quite difficult. Altogether she presented an array of symptoms which were quite undesirable. Upon examination there was no external hemorrhage to be found, but the abdomen had grown larger and softer. This at once suggested the possibility of dangerous internal hemorrhage. I at once decided to examine the condition of the uterus per vaginam, and if possible induce it to contract. This was accomplished after removing some very large coagula of blood from the os, after which a fearful gush of blood came from the womb, and I felt it contracting. The free hand was used in making external pressure over the uterus, which was continued for some time, and then a binder was applied tightly around the lower part of the abdomen, in order to support the flaccid uterus. By this procedure the hemorrhage was completely arrested, and of course the constitutional symptoms gradually abated. She, however, made a slow recovery, but eventually repaired the loss.

II.

UTERINE HEMORRHAGE.

By Cornelius Ormes, M.D., Jamestown, N. Y.

Hemorrhage from the human female uterus may occur from the first appearance of menstruation until the uterus ceases to perform that function as a normal condition of health, and after the climacteric period as a uterine abnormity.

We would make the following divisions in uterine hemorrhage, viz.:

Accidental and Unavoidable.—These two, from their causes, effects, and treatment, can hardly be considered separately without very nice discrimination.

Also, *Provoked and Professional.*—These, again, like the two first, could hardly be considered singly, as the hemorrhage is generally induced by professional and non-professional abortionists and other vile rascals, and it will here only receive a passing notice. The first of these is usually the product of the abortionist, who for a valuable consideration, and to gain notoriety, is willing to hazard the life of his patient and his own reputation and liberty, in the hazardous business of a professional infantile homicidist; and the only remedy we would recommend for such, whether male or female, is an indictment before a grand jury and a trial before a court of competent criminal jurisdiction.

And the professional hemorrhagists who make certain diseases of females a specialty (and we find them equally among the M.D.'s of both sexes in the profession),—practicing alike upon

patients who for some supposed or real disease consult the specialist and submit to physical and ocular examinations—at once, to the great horror of the patient, discovers some malignant disease, or something that may take on a malignant degeneration, or endometritis, cervicitis, corroding, or some other form of ulcer, which requires local treatment, to the tune of four or five dollars for each application, once a week for several weeks or months, causing a terrible flooding of currency to the patient or her friends; until some one discovers the fraud, diagnosing nothing but some simple disease which would have yielded to the true homœopathic remedy, and the patient saved the great pocket hemorrhage. Many instances of the above have come to my professional knowledge within a few years past; but the world still moves, and so long as the business is lucrative so long will the public bleed. The only remedy I would advise is to expose every one engaged in this hemorrhagic practice, and have them indicted as professional nuisances.

As above stated, uterine hemorrhage may occur at any time after the accession of the menses, during the life of the individual, no period being absolutely exempt from either accidental or unavoidable hemorrhage; the former may occur at any time of life, either in the married or unmarried, while the latter is confined to the married or parturient woman. In the unmarried or barren woman, it occurs as a symptom of certain diseased conditions of the uterus, or of some abnormal growth within its body or neck, as polypi, fibroid tumors, advanced stages of carcinoma, or corroding ulcer of the organs. It may be passive or active, according to the distension of the internal uterine surface and its inability to contract upon itself, or the morbid growth within its cavity, so as to completely close the bleeding vessels after the menstrual flow, from which the flow continues from one menstrual period to another, either in a passive or active form, until the patient becomes exhausted by these repeated or continued losses, and the constitutional remedies fail to relieve her, and she despairs of relief. On physical examination you detect some local disease, as polypi or fibroid, occupying the neck or fundus of the uterus, perhaps lying in the vagina, which you proceed to remove by mechanical means, and the hemorrhage is relieved. Should there be a con-

stant oozing or slight flow of blood, the internal use of Teucrium m. v., Macrotin, or Ergot, 1st decimal, will invariably produce uterine contractions and check the extra flow. Arnica and China in same dilutions frequently act promptly and favorably. When these fail, try the injection of Hamamelis or Perchloride of Iron into the vagina, and in extreme cases into the uterine cavity (Perchloride one ounce to four of water). Distressing contracting pains frequently follow the injections into the uterus; for their relief the sitz-bath, as warm as can be borne, injections into the bowels of very warm water, and Æther sulph., or one or two pills of Sulph. morphia, as a suppository, may be necessary.

In the unavoidable hemorrhage, there is no period of gestation after the first month in which it is not liable to occur. It seldom occurs before the fourth month, and most frequently from the seventh to the ninth; and the greater the danger as the patient advances to her full term of gestation, as at this time the results are proportionately larger than in the early stages of gestation, and the womb will give off more blood in a given time than in the earlier months, the danger being proportionally increased. This rule, however, is not absolute, as sometimes as alarming symptoms occur in an abortion at six or eight weeks as in labor at full term.

The causes of hemorrhage in the early stages of pregnancy, or previous to the seventh month, are various, among which may be mentioned those which break up the connection between the placenta and uterus, causing miscarriage or abortion; and without this occurrence we find no considerable hemorrhage.

When hemorrhage occurs before delivery, we find one of the following causes to exist: Mechanical injury, sudden shock or emotions of the mind, plethora, too short a funis.

After expulsion of the fœtus: Unequal contraction of the uterus, atony, engorgement, and inversion.

Each or any of these causes may produce uterine hemorrhage, though the mode in which they effect this is not perfectly well understood, as it should be; but the consequences upon the system, irrespective of the cause, are one and the same.

It is thought by some, that an increased force of circulation was sufficient to produce the evil in question. With the new order

of things that is now going on in the system, the great change taking place, especially in the uterine cavity, when the new organizations consequent upon pregnancy are in a feeble and the new forming tissues in an extremely delicate condition, it is no wonder that a sudden impression upon the sensitive parturient woman should cause some lesion to occur in these delicate forming organizations. Hence we conclude, it is not forced or increased circulation alone that absolutely induces the hemorrhagic condition; or if so, why does not every pregnant woman abort when suffering from an increased arterial action? I am of opinion that something more is required than increased arterial circulation to separate the ovum in the early stages, or the placenta in the more advanced period of pregnancy.

It is a well-known fact, that women lose large quantities of blood in the early stages of gestation, and, when unattended with pain or contractions, neither abortion in the early periods, nor premature delivery in a more advanced stage, occur, even when this condition has been present in its severest degree.

We consider contractions essential in every instance to the separation of the placenta, whether in abortions or delivery at full term.

Pain frequently commences hours and sometimes days before any flow of blood, and the hemorrhage will not cease until the contractions sufficiently diminish the bulk of the ovum, thereby closing the lesion by the uterine contractions.

Therefore, when the ovum is about to be cast off, either in the early or later stages of gestation, pain and contractions are essential, not only to cast off the ovum but also to assist by their contractile force to check the hemorrhage after the expulsion of the ovum, and they show a healthy condition of the uterus; and we seldom have serious trouble when there are energetic pains and contractions with the hemorrhage.

There are two valid considerations to be thought of, which serve us as a guide in the successful treatment of uterine hemorrhage during pregnancy, and upon which our success greatly depends; these are, whether the process of gestation has ceased, or whether the process has not been interrupted. These con-

ditions should not be passed unregarded, as upon our decision may depend the life of our patient and our own reputation.

It should, therefore, be the first business of a physician to ascertain, as near as possible, the precise condition of his patient.

When we find sudden chills, faintings, great agitation of mind, with hemorrhage and pain, shrinking or flabby feeling of the abdomen, and, as has been remarked by several writers as an unequivocal sign, "when the breasts have become tender and tumid, and then pretty suddenly subside," "it would be a forlorn hope to administer remedies with a view of retaining the ovum."

Our treatment should be, first, preservative, to protect the ovum and arrest the bleeding; secondly, palliative, to subdue pain if present; thirdly, active, to prevent a recurrence of the hemorrhage.

The patient should be confined to a horizontal posture on a mattress or hard bed; give her perfect rest of body and mind, and inspire her with confidence. If much prostration, says she cannot breathe, tell her, in an encouraging way, to keep trying; don't give a discouraging word, nor permit the attendants to do so. At the same time, administer internally China and Arnica, first decimal, alternately every five minutes. With your hand upon the abdomen watching the contractions, you will relieve your patient.

If abortion is imminent, and the life of your patient is in peril, with your China give Ergot in sensible doses. At the same time render what manual assistance is necessary, without officious handling; judiciously assist nature in the expulsion of the ovum or fœtus; and should hemorrhage continue after expulsion of ovum or placenta, with the hand over the uterus—and the Ergot is not sufficient to control the hemorrhage—plug the os uteri, and not alone the vagina, with cotton-wool saturated in a solution of Perchloride of Iron.

III.

HEMORRHAGE AFTER LABOR.

By William H. Hunt, M.D., Covington, Ky.

As the ripened fruit drops from the parent stem, so the fœtus, when sufficiently developed for independent existence, is separated from its parental connection. Labors are usually called natural in which the child is so disposed within the uterus or pelvis that the birth can be accomplished by the efforts of nature, in contradistinction to unnatural or complicated labors, which require manual or instrumental assistance. Gestation and parturition are natural processes; it is as natural for a woman to bring forth children, as for a shrub to produce flowers and fruit, and her organs are naturally adapted for the purpose. In a state of health, no natural process is painful or perilous. Pain is in most if not all cases the sign of disease; it has no other use or signification; with a sore throat, it is painful to swallow; with a diseased stomach, digestion is painful; so is childbirth painful and perilous to a diseased system, but not to an entirely healthy one. It is not credible that any natural function should be attended with peril in a healthy state of the system; all nature protests against the idea, all experience is opposed to it, causes and effects are too well adapted to each other, ends and means too admirably fitted. It is not to be supposed that the most important of all the functions of the most perfect of created beings of whom we have any knowledge should be subject to inevitable peril in its performance. Such a belief is an insult to Providence. There can be no question, that in the original creation of woman she was fitted to obey the command, "Increase,

multiply, and replenish the earth," without peril. The idea of the curse inflicted upon her carries with it the belief that she was created perfect in this particular. An opinion prevails extensively in the world that great peril is the ordained law of woman in childbirth. If mother Eve was sentenced to bring forth in sorrow, it was because of her personal transgression. The woman who agonizes through the period of parturition has most certainly transgressed the laws of health in her own person, and the peril she too often encounters is because of her having eaten of the forbidden fruit of enervating luxuries and excesses. Of all the possible complications that may or can compromise the safety of the mother in childbirth, and which renders the presence of the physician a *sine qua non*, none can outrank "post-partum hemorrhage," or that form which occurs after the delivery of the child, and which may arise either before or after the detachment of the placenta.

The uterus has been properly called a "hollow muscle." When not distended by some distracting force it will contract by virtue of some power of its own, and upon the healthy disposition of this kind in the uterus does the welfare of the woman depend in every instance of childbirth or abortion. The efforts that the organ makes to expel its contents and to close itself after it has performed this office, are by virtue of a genuine muscular contraction; in the performance of these offices two distinct powers are concerned: one shows itself by a constant disposition to lessen the cavity of the uterus, the other declares itself by alternate contractions. The first of the powers just noticed has been called "Tonic Contractions," the second "Spasmodic Contractions." This latter cannot take place without the former having preceded it, though the former can happen without the latter. The uterus in its healthy condition exerts its tonic force to close upon and accommodate itself to the exact size and shape of its contents. As soon as the liquor amnii is discharged the uterus instantly diminishes its size, by virtue of its tonic power, and this is in exact proportion to the quantity of water displaced. When the child is delivered it reduces itself so much as to compress the placenta and force it from its attachment, and eventually expels it from its cavity. When this is

achieved, it continues reducing itself until it interrupts, in a great measure, the supply of blood from the "spermatics and hypergastrics," closing almost completely the mouths of the vessels by a separation of the placenta, and thus preventing any immediate flow of blood. The safety of the woman depends entirely upon the healthy exercise of the power termed the "Tonic Contraction." The risk she may run in giving birth to her child is in exact proportion to the diminished force of this power; of course, the preventing and stopping of floodings will depend upon recalling it when absent, or augmenting it when deficient.

The tonic power of the uterus may be feeble or altogether wanting; it may be lost in every portion of the uterus or only in a part. The fundus may possess it; it may be absent from the neck and body; as a consequence we may have inversion of the organ; hour-glass contraction may be induced by the fundus and neck being deprived of it while the body enjoys it. Whenever we have the uterus in a state of inertia, after the birth of the child, we necessarily have more or less hemorrhage. The rule is, and there is, perhaps, no exception to it, that we must obtain complete contraction of the uterus to assure the safety of the mother, otherwise we have that frightful form of bleeding known as "post-partum hemorrhage."

The remote causes of uterine inertia are unusual laxity of fibre, as in certain habits of body, over-distension from an excess of liquor amnii, emotions or passions of the mind, protracted labors, lesions in the proper substance of the uterus itself, general debility from long sickness. The hemorrhage may appear before the expulsion of the placenta; there may be a partial separation of the placenta, the uterus possessing some tonic power. In every instance after the birth of the child more or less blood passes from the vagina. This must not be looked upon as a hemorrhage unless it continue and has an evident effect upon the pulse.

We may have a partial separation of the placenta while the remaining portion is too adherent; then again the uterus may be in a state of exhaustion. Flooding oftener occurs after the expulsion of the placenta.

We recognize that flooding has taken place or is taking place,

by the objective symptoms; from a countenance full of life and animation, an eye bright and pregnant with lustre, we have in a few moments the same countenance pinched and hippocratic, face pallid, the eye loses its brightness, is sunken, and the change is like that produced in the countenance by death. The appearance is unmistakable, it requires but a glance to tell the attendant that his patient is fast breaking up, and without instant interference she must soon go to pieces.

The indications for treatment are plain and positive. Here we need no tampering; every moment is freighted with the greatest possible interest, and upon the celerity of our action does the safety of the patient depend. As the great indication is to cause uterine contraction, we must first resort to external and internal manipulation; you need have no fear of exciting inflammation if the manipulations are carefully performed. The instruction given by Dr. Meigs years ago, to "turn out the clot," is at the present day as effectual as any advice that has since been given. Next, as an ever-ready means, we have the "*cold douche*," and the packing of the uterus and vagina with pounded ice. I am satisfied that this latter treatment, in not a few cases, is the only possible means of arresting the flow. In 1873 I attended a lady in her fourth confinement; for a year previous to her conception she had been treated by a specialist who had used caustic applications to the internal surface of the uterus and os; the labor progressed in the natural way, no untoward symptoms developing until after the expulsion of the placenta, when a most frightful hemorrhage supervened. I have seen, during the last eighteen years, several severe hemorrhages after the birth of the child, but never have I witnessed a patient exsanguined in so short a time. I found it impossible to cause contraction sufficient to stop the flow by any external or internal handling, and as a "dernier ressort" I packed the uterus and vagina with ice, kept iced cloths over the abdomen, and finally saved the patient, and the convalescence was unattended by inflammation or untoward symptoms. Dr. S. R. Beckwith saw the case in consultation. In the employment of cold we should remember that if too long applied it acts as a depressant and loses its effect, and that the colder the water the greater the shock, and the more powerful is its effect in

inducing permanent contraction. Do not continue the cold too long lest it increases the exhaustion; the effect depends upon the coldness and not upon the quantity of water used. Some authors recommend the alternate use of warm and cold water, and even hot water.

The introduction of the hand should not be put into practice only as "a last resource." With all respect and deference to some of our worthy homœopathic obstetrical writers and teachers, I should advise that the introduction be made instantly; relieve the uterus of the clot, and the presence of the hand within the cavity will induce contractions, as well as assist in closing the patulous utero-placental vessels by contact. Do not hesitate and thereby lose precious time, by trying a number of indicated remedies with the hope that the introduction of the hand may be avoided. Let your medicine-case remain in your pocket until you have first obtained contractions of the uterine fibres; then if you choose you may ransack your brain or hunt the Materia Medica for the remedy indicated. If you pursue this course you will save your patient and your credit, and homœopathy will lose none of its prestige. We have a mechanical difficulty to overcome, and the issue must be met only by appropriate means. I doubt very much whether an inertia of the uterus was ever overcome, or a very great quantity of clotted blood ever expelled by the use of attenuated medicines. They will cure dysentery, or a cholera, but I should be loath to trust the life of my patient to a potency or a drug in a case of flooding occurring after labor. If possible, during the introduction of the hand give brandy. The judicious use of brandy averts the faintness and shock which otherwise might ensue. When the patient is exceedingly low it is a question whether the hand should be introduced before the patient is somewhat rallied. The use of diffusible stimulants is condemned by some of our best authorities, from a conviction that they increase the arterial circulation and encourage the hemorrhage. The common practice of giving the patient cold water or vinegar and water to drink, and keeping the body in a cool state by means of a well-ventilated, cool room, are excellent adjuvants.

In addition to the means already cited, other means and reme-

dies have been recommended, as Ergot, electricity, treating the uterus with styptics. The Ergot is not always available, and when at hand is too slow in its action. On this account it often fails. The application of electricity will always answer the purpose when possible to use it, but the delay necessary in procuring a battery will almost always preclude it as a remedy. Styptics may be used in desperate cases with safety. Sometimes you will find that, with all your endeavors, it will be impossible to cause contraction, the uterus remaining in a dilated condition. In this case I should not hesitate to inject into the cavity Monsell's solution. I can speak from experience. This treatment has aided me when every other means failed. Ustilago maidis is an excellent remedy in hemorrhage from the uterus. In the hands of my friend Dr. S. R. Beckwith, it has served a good purpose in post-partum hemorrhage. While I would not condemn or discourage the use of medicine in hemorrhages after labor, yet I would most emphatically urge upon you the necessity of taking a practical view of the situation, hoping that you may be led to a sensible and effective treatment. If the femoral artery is severed, tie it; if the utero-placental vessels are open, close them.

IV.

THE HOMŒOPATHIC TREATMENT OF UTERINE HEMORRHAGE.

By Mercy B. Jackson, M.D., Boston, Mass.

Belief in the great superiority of homœopathic treatment over mechanical means in arresting hemorrhages, induces me to present this paper to the Institute.

Observing a tendency to resort to the latter instead of carefully selecting the appropriate remedy, by which in a very brief time the flow of blood may be arrested and the tendency to repeated hemorrhages removed, I feel that this side of the question should be often presented, that our young physicians may not be led to resort to mechanical appliances where medicine would be far preferable.

The advantages of homœopathic treatment over mechanical are, first, that the flow of blood is more quickly checked; second, the method is more agreeable to the patient, as it avoids the sufferings caused by compression and the tampon, both of which often produce severe suffering; and thirdly, the tendency to a return of hemorrhage is removed by the truly homœopathic remedy at the same time that the present hemorrhage is cured; fourthly, it gives the patient great faith in our system to see a small dose of medicine overcome so alarming a disease in so short a time.

In almost all the cases of alarming hemorrhage that I have seen, in ten minutes after the administration of the right remedy the improvement has been such as to inspire faith in the patient that a cure would soon be effected.

METRORRHAGIA.

In a case of post-partum metrorrhagia, with violent after-pains of an expulsive character, almost as severe as had been the last throes in her labor, and with every pain, coming in rapid succession, a gush of blood that deluged the bed, and so severe that life could have been sustained but a short time, I still had faith in our remedies and sought no other assistance, but carefully compared the sufferings of my patient with the symptoms of the medicine.

Sabina has "metrorrhagia with discharge of clotted, bright red blood, and pains resembling labor pains in the loins and inguinia." It was the exact counterpart of my patient's sufferings. It was administered, a few pellets in water, and in ten minutes the flow and pains were relieved, and in half an hour the patient was comfortable and free from danger. In her previous confinement she had flowed in the same way, with mechanical treatment and allopathic medicines, until she nearly lost her life, and had not been able to leave her room for over three months. In two following parturitions, under homœopathic treatment, she had no metrorrhagia, and made a rapid recovery.

CASE 2.—In a case where I was engaged to attend a lady in her expected confinement, I was summoned early in the morning, at the end of her time, by her husband, who came trembling with excitement, saying his wife had slept well during the night, and had just awakened, and found herself flowing without pain, and by the time he was dressed, "her bed was all afloat," to use his own expression.

The distance was short, and we were quickly at her bedside, and found a truly alarming sight.

Asking a few questions and observing my patient, I was induced to give Bell. 30th. There was coldness over the whole body, with shivering, trembling, and paleness of the face, great agitation, and fear of death; she was thirsty and drank tremblingly, all of which symptoms are in the provings of Bell., which was administered in the same way as was the Sabina in the first case, and in ten minutes an examination did not soil my hand!

The pains of labor did not come on for three hours, after which a rapid and favorable travail succeeded, and to my great

delight no metrorrhagia followed, and a good recovery was made. In this case also, although almost fatal hemorrhage had attended the previous parturition, and she had been so reduced as not to leave her room for over three months, in the two following confinements no hemorrhage followed or attended.

MENORRHAGIA AT THE CRITICAL AGE.

In a case of extreme menorrhagia at the critical age, and at the catamenial period, where the woman had been almost exsanguined under allopathic treatment during the year previous, and who feared that each attack would destroy her, I was called in to one of the attacks. On careful observation of the case, I found there was irritation of the rectum, tenesmus of the bladder, and diarrhœa, all of which symptoms led me to use Erigeron Canadense. I had only the sixth dilution with me, and put one drop in one-half a tumblerful of water, and gave one teaspoonful. The hemorrhage was so great, and the woman so bloodless, that I deemed it highly important to arrest the flow as quickly as possible, and so took a little cotton and saturated it with some of the solution, and placed it at the os uteri, and in a short time the menorrhagia was checked, and the flow very slight, continuing only three days instead of three weeks, as it often had done before.

After this the intervals lengthened, and she only sent to the office for the same medicines when they came, and with China during the intervals she improved rapidly, and so much that in a year her acquaintances who had not seen her during that time hardly recognized her, and the critical age was passed and health restored.

Unfailing success for more than thirty years in arresting hemorrhages with the homœopathic remedy, *unaided* by any mechanical means, has given me such confidence in this method, that I hear with regret of the clumsy appliances of tampons and other kindred means, by those who, having all the armamentarium of our rich Materia Medica at hand, have little need to resort to anything else.

And I earnestly desire that our young men and women, who are now entering the hallowed precincts of an advanced school of medicine, may learn the *better way*.

V.

MENORRHAGIA AND ITS TREATMENT.

By E. S. Cook, M.D., Buffalo, N. Y.

When menorrhagia is caused by intra-uterine disorders, such as polyps, ulcerations, or fibroids, I invariably dilate with sponge-tents, or what in skilful hands is preferable, "Dr. Molesworth's Climax Dilator," and remove the cause surgically, then treat the walls with an ointment composed of glycerin fifty parts, potass. iod. one part, and iodine crystals one part, or carbolic acid and glycerin one part to fifty. In the meantime, Crocus sat., Hamamelis, and Millefolium are administered according to symptoms. Urgent cases sometimes require tinct. of Ergot in half-teaspoonful doses. This, however, is rarely necessary, except in severe operations, or where interstitial tumors prevent the organ from contracting, as in a case I will give you.

A Mrs. C., æt. 41, came under my care four years since, having been treated for uterine hemorrhage and vicarious menstruation from the lungs, by Dr. Fordyce Barker and other eminent surgeons of New York. For ten years previous, she had from two to four attacks of raising from the lungs, always with coughing, a quantity of very dark blood, varying from two tablespoonfuls to a teacupful; no prostration followed except what would be expected in a nervous subject, and she would resume her ordinary duties, with but a few hours or perhaps a day of rest. The cough, which was present through all these years at these times, was persistent and irritating. The months in which the lungs were not involved, menstruation was natural

but excessive. Soon after she came to me, I discovered an interstitial fibroid, occupying the anterior wall of the uterus, impinging on the bladder, and causing its contents to escape every time she coughed. I also found an inguinal hernia, and sent her to Darrows & Co., corner Thirtieth Street and Broadway (where I would recommend all who need trusses to go), to be fitted for one. The attendant, on account of the tumor, refused to fit her without the advice of a surgeon. In Sims's absence, she consulted his associate, who told her husband she might die any time from hemorrhage, either of the lungs or uterus. His diagnosis was identical with the one I had given, and she returned, and expressed herself willing to die when her time came, in my hands. During these four years she has moved in the first circles in society, few persons suspecting her an invalid, and to-day I consider her chances for another four years even better than the last, although there is a slow increase of the tumor.

The worst cases of menorrhagia which I am called to treat, are some from water-cures, where they pack the vagina with ice and put compresses of ice-water over the abdomen. A lady is at this time being treated at our office, who had the ice treatment at intervals during five successive years, until the neuralgias were so terrible they were forced to desist, at the same time telling her there was no help for her; she must be content that she was not as bad as many, and exercise a Christian's resignation. I found the uterus hypertrophied, retroverted, indurated, and the nervous system shattered. Applications of the glycerin and carb. acid ointment once daily, and Caulophyllin thrice internally, in a few weeks' time, reduced the hardness sufficient to straighten and introduce a Simpson stem pessary. The next catamenia was painless and less flooding. I expect she will be cured in from three to six months, as hundreds of similar cases have been. After the induration is overcome, electricity with the positive applied to the os twice, and the negative to the back, is the most valuable remedy I know to strengthen all the uterine viscera. In all cases of retroversion or flexion, the exercise of creeping upon the hands and knees fifteen or twenty minutes daily, assists the uterus in regaining its natural position. If it were the place, I would like to give a little of my experience in dysmenorrhœa,

which affects by far the greatest number of women. Among the causes are tight and heavy clothing worn upon the hips, causing the uterus to be deflected, either forward or backward, from its normal position, and thus closing the canal. The menstrual blood being retarded in its flow, coagulates in the cavity, and the pains of childbearing are light in many cases, compared to those caused by the efforts of the womb to expel the clot. Electricity, wearing the stem pessary, manipulations favoring the reduction of the flexion, or section, and remedies selected from a careful study of symptoms, among which are Puls., Sepia, Caul., and Bell., have restored health to the greatest sufferers it had been my lot to witness. Hydrastis Can. is a tonic and appetizer, which does not often disappoint, if carefully selected. If the doctors would unite their efforts to teach the mothers among their patrons the laws of health, they would save more suffering than they now cure, and help populate the earth with healthy women, whose organizations would be capable of bearing more perfect children than any we have seen, children possessing the possibilities of perfect man and womanhood.

VI.

VAGINAL HERNIA—OPERATION FOR RADICAL CURE.

By Willis Danforth, M.D., Chicago, Ill.

Miss J. S. S., 34 years of age, full habit, weight one hundred and sixty pounds, teacher by profession, had been troubled with pain in left side for past ten years. She had consulted many physicians, but has not received any satisfactory explanation of the cause of her sufferings, or any benefit from treatment suggested.

She has been able to walk short distances and be about the school-room, in the discharge of her duties as teacher, until the past year and a half, since which time she has experienced more pain and suffers extreme debility on the slightest exertion.

Present (August 10th, 1873) symptoms: "Throbbing deep-seated pain in left iliac region, a catching pain, something like a stitch, with a peculiar feeling of brokenness, as if a chain were unlinked or a joint put out, which often obliges her to stop at once whatever she is about, and seek relief by lying down or changing position; a sickening distress in left abdomen, as though colic or diarrhœa were about to supervene; exceedingly weak on standing for five minutes; frequently taken with vomiting, and when vomiting ceases pain and distress continue; fulness and weight in lower abdomen; heat or burning, tending toward the chest, causing thirst and feverishness; dimness of sight; cannot read fine print; pain streaming down left limb; heat in vagina, with very great soreness in left ovarian region," etc.

These symptoms were given by the patient herself, who said that her menses were quite regular and unattended with any unusual symptoms; bowels regular; appetite fair; digestion ordinarily good, and yet she was *wholly* unable to teach or be about the house with any degree of comfort; in fact, life was a burden

to her, the more so because she could not ascertain any cause for her sufferings, and hence despaired of relief.

I made a careful vaginal examination, and discovered that the anterior wall was thin and, when she was standing, gave way to pressure above it, folding in upon itself, thereby presenting the appearance of a tumor. I continued the examination for two hours (alternately standing and lying), until I was convinced beyond a doubt that she was suffering from a vaginal hernia, and that it was the probable cause of the most, if not all, of her troubles. The lower portion of the vagina was of usual thickness, supporting the bladder firmly, showing no disposition to cystocele; but it was the upper portion, just below the cervix, that was so attenuated or relaxed as to admit of a descent of the intestine into the vagina. When in the recumbent posture the tumor could be reduced completely, but once upon her feet it immediately returned again.

The case was remarkable in this, that it occurred in a virgin, and could not be traced to any injury or known cause.

I advised the use of Nux, Hamamelis, Pulsatilla, Bryonia, and vaginal injections of Pinus Canadensis, which she tried for two months without any substantial benefit.

Finally, I advised an operation, to which she most cheerfully consented, convinced that nothing short of it would help her. Accordingly, on the 10th of August, 1873 (just after her menstrual period), she was etherized and brought upon the table, on her left side, a wide Sims's speculum introduced, which brought the hernia plainly into view, and, assisted by my colleague, Professor Ludlam, and Dr. R. K. Paine, I proceeded to operate, by denuding the vagina of mucous membrane on either side of the hernial protrusion, the dissection forming an ellipse about the tumor. The raw surfaces were then brought together by seventeen interrupted silver-wire sutures. The wound healed throughout its extent (sutures removed on the tenth day), and patient got up three weeks after operation, feeling very much improved by the stitching. Digital examination of vagina discovers a firm cicatrix in place of the lax wall first encountered; there seems to be no disposition to further protrusion, and, withal, almost all of the pain and annoying symptoms have disappeared.

APPENDIX.

DISCUSSIONS.

[Second Day—Morning Session.]

COATES PRESTON, M.D., Chester, Pa.: I rise to make a few remarks on the paper of Dr. Hunt, which has just been read by Dr. Beckwith. It is a very fine paper, so far as construction goes, and no doubt it is scientific. The author gives us plenty of directions in regard to local applications and mechanical appliances for the arrest of uterine hemorrhage; but there is not a word about the use of homœopathic medication. It is urged by the author that there is no time to select and give medicines; but I contend that there is as much time to select a remedy and use it, as to choose and prepare and use some of these applications that the Doctor advocates, and especially if the practitioner has a proper knowledge of Materia Medica and the indications for the various remedies. On the contrary, I claim that it is a saving of time to use remedies instead of the tampon, and the remedy acts more quickly, more surely, and is more scientific than the tampon.

S. R. BECKWITH, M.D., Cincinnati, O.: Mr. President, I object to the remarks of the gentleman. They are out of order. I rise to a question of privilege. The paper says nothing of the tampon, and yet the gentleman pretends to discuss the paper while persistently referring to the tampon.

THE PRESIDENT: The gentleman will confine his remarks to the points of the paper he proposes to discuss.

DR. PRESTON: The paper states that there is no time for the administration of medicines.

DR. BECKWITH: No, sir; it does not even state that; it simply states the fact that time will be lost in selecting a medicine, which can be utilized for the benefit of the patient.

DR. PRESTON: It does not require as much time to take out a medicine-case, and give the patient a medicine, as it does to get and use hot water, or roll up and introduce a tampon. Do you mean to say that homœopathy is powerless in these cases; powerless to arrest hemorrhage? I say it is as powerful to arrest hemorrhage as it is to cure disease. It is true that we have here vessels with open mouths, pouring out their blood;

it is true that the uterus is relaxed; but have we no medicines that will produce contractions? Even the allopaths use drugs to produce uterine contractions under such circumstances; and they would cure their cases oftener than they do, if they gave their drugs guided by the homœopathic law, and gave them in smaller doses. If you find your patient exsanguined, and very weak from the loss of blood, what more efficacious to restore her than homœopathic remedies? I have never yet had a case, no matter how bad, in which I have not had as much, nay even more satisfaction from the use of homœopathic remedies, than from the use of appliances. China and Carbo veg. have done me good service in the most desperate cases; they have, as it were, gone down to the verge of the grave, and rescued the patient and restored her to life in more cases than one. In a practice of over twenty-one years, I have, of course, seen quite a number of cases of uterine hemorrhage, and I can say that in all that time I have not lost a case, and I have relied exclusively on the use of homœopathically selected remedies, comprising but a few medicines. I have seen women pulseless, pallid, and cold as marble, with a cold sweat on the brow as from the damp of death, and yet China changed the scene, and saved them from their impending fate. Why not do away with the appliances, and stick to homœopathy, if it is as good or better? Can you, by seizing the uterus with the hand, bring about contractions of the longitudinal and circular fibres?

Dr. Beckwith: The directions are given to introduce one hand into the uterus, and to clasp the uterus through the abdominal wall with the other. Please do not misstate what the paper has given you.

Dr. Preston: It does not matter. I say it is impossible to bring on uniform contractions by any such process. You may seize part of the uterus, but you cannot arrest the flow.

S. Lilienthal, M.D., New York: I yesterday said I never resorted to external applications, but in these cases of hemorrhage I do. I put everybody out of the room who has no business there. Then I generally use hot water, and I have more confidence in it than in any other adjuvant. I fully believe that most, if not all, of these cases are just as amenable to our remedies as is any other form of disorder. The trouble is that we do not study our remedies closely enough, and we are not ready enough to apply them. And from making a wrong prescription, and seeing no good resulting, we give another and another medicine, quickly flying from one to the other, and then we at last come to the conclusion that our remedies are powerless in such cases, and we resort to ice, hot water, tampons, and other appli-

ances. But I am not so rabid on this subject as the gentleman who has just spoken. These appliances are handy and useful, and there is too much testimony as to their efficacy to be disputed. And I am free to admit that there may be cases in which nothing else but these appliances would save life, especially in view of our insufficient knowledge of the application of our remedies.

F. R. McMANUS, M.D., Baltimore, Md.: The use of hot water has been mentioned. I have not used it myself, and would like to know the method of its employment, and the rationale of its action.

DR. LUDLAM: We are often asked questions that we cannot answer, and this is one of them, as regards the rationale of the action of hot water in arresting uterine hemorrhage.

J. C. SANDERS, M.D., Cleveland, O.: I wish to offer a few remarks on the paper of Dr. Hunt. I think this paper should not be allowed to pass without further consideration on the part of this body. I do not object to its acceptance, but I do object to some of its contents, and for several reasons. The first of these is, that the treatment is crude and rude, and takes no cognizance of the pathological conditions which lie behind, or rather underneath the inertness and flaccidity of the uterus. I believe that the relaxed womb, infiltrated and filling with precious blood, is so because of some morbid process or force at work in the system; and my increasing experience daily teaches me, and I am more and more convinced, that the homœopathic therapeia is abundantly able to overcome this morbid force and control the hemorrhage, by causing the womb to properly contract. By Dr. Hunt's method the uterus is treated as he would treat an intractable steer, by breaking it in by the roughest means; while I believe more can be gained by a wisely discerned and properly administered medicine. I object again to the Doctor's treatment, because I think that so far as the immediate necessities of the case are concerned, he is not doing the best that may be done for his patient. I would like to know how many of Dr. Hunt's patients died on his hands.

DR. BECKWITH: I will answer for the absent. He has not lost one case in twenty years of practice.

DR. SANDERS: Then how many of these cases has he trusted to the homœopathic therapeia? And if he has trusted none of them to it, why does he come before us, a body of homœopathic practitioners, and thrust these crude and rude means before us as though they were the only means or the best? If he be a homœopath, then why is he not willing to trust the homœopathic therapeia in these exigencies as well as elsewhere? I have not the least doubt but that he will abandon these means and appliances as I have

done, and learn to trust to homœopathy more and more as I have done, and come to regard homœopathy as alone sufficient, even in these trying cases, as I have done.

A. S. BALL, M.D., Brooklyn, N. Y.: It seems to me that if the sick uterus be left to a competent nurse, it will do quite as well without special medical treatment. I believe that in these cases the flow of blood is its own best remedy, the tendency of the flow being to stop. I cannot say that I have quite so much faith in the use of these various appliances for arresting the hemorrhage that some gentlemen seem to have; nor have I any faith in the power of the high potencies to arrest a flow of blood; but the blood stops flowing for all that. And so far as the use of high potencies is concerned, I believe that even if I were a strong advocate for their use, and an habitual user of them, I would not give them in these cases, because that the hemorrhage and its incidents had so affected the system as to put it into a condition not susceptible to the influence of potentized medicine. And I look upon this as a justification of the resort to adjuvants and mechanical appliances in such cases. I have used the tampon, and I still resort to it occasionally. I must say that I have seen its use followed by uterine contraction.

S. R. BECKWITH, M.D.: It gives me great pleasure to stand up in the defence of my absent friend, Dr. Hunt. The Doctor has not said one disrespectful word regarding the homœopathic law, and he has not in any way violated the principles of that law. He has a right to plug the vagina with a tampon or with ice, or to select a remedy homœopathically and give it, and he has as much right to do both as you or I have to do either; and he is just as good a homœopath as you or I. You claim to be physicians, healers of the sick, and you say you are enlightened homœopaths. Then tell the public that you are not bigots, bound to a narrow circle outside of which you dare not go, but that you dare know all and do all that can be known or done to alleviate human miseries and sufferings, and that you reject nothing because it does not agree with your views or your favorite dogma. When you act this way you do your whole duty, and by acting otherwise you come short of it. I read a short while ago, in one of our journals, of a physician who stood before an almost corpse-like woman, pallid from loss of blood, and hanging between life and death, and he gave the 200th of China, and he gave no nourishment. What would be thought of me as a surgeon if I were to thus give China when the femoral artery was divided; and what difference is there between the femoral and the iliac? Why should not I, as a surgeon, resort to such measures in uterine hemorrhage as I know will arrest the flow

of blood and save the life, such mechanical measures as I would use to stop the flow of blood from other vessels, under penalty of being denounced by those who claim that the blood can be and must be stopped in no other way than by the mysterious operations of some dynamic power, spiritual influence, soul force, hidden mystery, or moonshine, to be evolved by high potencies? It is high time for our school to stop denouncing worthy members because they do not do what we think is right; and it is high time for us to stop abusing other schools of practice. Let us make it known that we are a scientific body.

J. H. WOODBURY, M.D., Boston, Mass.: I wish to make some remarks on this subject of post-partum hemorrhage. We have been told here to-day, that when the blood is flowing in a full stream from the uterus, and life is ebbing rapidly away, the only proper thing to do, the only good thing to do, is to use the selected homœopathic remedy. I have seen quite a number of cases of post-partum uterine hemorrhage, both in my own practice and in that of other physicians, and I have seen them put a stop to by a variety of means; indeed, a good many of these cases are not dangerous, and will stop of themselves, or by the use of appropriate treatment. But once in awhile—it may be but once or twice in a whole lifetime's practice—we come across a case of such urgency that the blood must be stopped at once, or life will be lost. What is the condition underlying this terrible process? Perhaps the woman has been tortured through a tedious and painful labor, and her whole nervous energies are prostrated; and the uterus, which has been in violent operation for hours, has expended all its energies in the last expulsive efforts that emptied it of its contents, and now lies as it were completely prostrate and helpless, unable to contract, and thus close the open mouths of its numerous vessels, which are pouring out the life-blood in a copious stream; or it may be that by a shock to the nervous system—something has occurred in the lying-in chamber, for instance, of an unpleasant or frightening nature—it has been deprived of its ability to contract, with similar results of copious hemorrhage. Now, can you give medicines here with the expectation that they will act more quickly than they will to stop a nausea? Can you expect even that medicines will have as prompt an effect here as usual, when the whole system, nervous, muscular, and vital, so to speak, is so prostrated? I make no quarrel with those who give medicines, but the first thing I do in such cases is, to bring about prompt contractions of the uterus; and if I succeed in producing strong contractions I do not fear much for that case. And do not forget that the method indicated by Dr. Hunt is the safest and quickest

to produce these contractions. With one hand in the vagina, seize the cervix, and with the other clasp the fundus through the flaccid abdominal walls, and you will at once get contractions. You are then free to give your remedy, selecting such a one as may be indicated, and will act promptly and powerfully on the nervous and muscular tissues of the womb. This manual procedure is not unhomœopathic, nor is it anything that should call down the anathemas of any one; but it is a procedure that will save life, and will in all cases save that last ounce of blood, upon the retention or loss of which may depend the after health of the patient, the quick or the lingering convalescence. And I would, for these reasons, commend the use of the ice, the cold water, or anything else that will bring about good and prompt contractions.

DR. MCMANUS: What about hot water?

DR. WOODBURY: I have seen it used with good results in many cases. Hot water acts by exciting contractions; and it does more than this, for when a stream of it is thrown into the uterus, it washes out the clots, which may be the means of preventing firm contractions.

DR. MCMANUS: Would not cold water or a lump of ice act by exciting the uterus to contract?

DR. WOODBURY: Precisely; that is the rationale of the action of all these means; but water may wash away clots of blood which prevent contraction. I have seen uterine hemorrhage of the slow and oozing kind, which is kept up day after day, for some time, promptly arrested in a few days by the application of the hot-water bag along the spine.

DR. BROWN: Have you had a case where the hemorrhage was controlled by the external use of warm water alone?

DR. WOODBURY: No severe case. I would again remark that these very bad cases come very seldom. I have had a pretty large obstetrical practice, and yet I have seen not more than two or three cases in which I needed anything more than the internal remedies; but I have seen cases that I believed could not have been saved if I had depended upon such means.

F. F. DE DERKEY, M.D., Mobile, Ala.: Why not try the remedies first?

DR. WOODBURY: Because you must produce contractions at once, or your patient will be lost, and you cannot afford to wait for the tardy action of the remedies. I wish to overcome at once the inertia of the uterus, and I do it by grasping the cervix and the fundus in my two hands.

SECTION XII.

REPORT

OF THE

BUREAU OF PÆDOLOGY,

T. C. DUNCAN, M.D., ... Chicago.
EMMA SCOTT, M.D., ... New York.
F. R. McMANUS, M.D., ... Baltimore.
C. H. NIEBELUNG, M.D., ... St. Louis.
HENRY NOAH MARTIN, M.D., ... Philadelphia.
NATHAN R. MORSE, M.D., ... Salem, Mass.

TO THE

TWENTY-SEVENTH SESSION

OF THE

American Institute of Homœopathy.

VOLUME I. NUMBER 1.

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I.

NATURE AND ETIOLOGY OF CHOLERA INFANTUM.

By T. C. Duncan, M.D., Chicago.

I. NATURE.

Cholera infantum is a disease incident to hot weather, and is *the* scourge among American infants; every case of so-called summer complaint is not, however, cholera infantum. It is confounded with gastroenteritis and enterocolitis. But it is not simple diarrhœa nor inflammatory diarrhœa. It is non-inflammatory, sudden in its onset, rapid in its course, and terribly fatal in its results. It attacks young and generally teething children, who have been healthy or subject to simple diarrhœa, or sometimes inflammatory diarrhœa. A sudden burst of hot weather attended with cloudy skies usually ushers it in. There is sudden and severe diarrhœa, nausea and vomiting, but the most marked symptom is the great prostration. The dejections are first natural, then thin, watery, yellow, greenish, and run through the napkin. If the diarrhœa continues any length of time, there is usually more or less tenesmus. The vomiting is sudden and severe, and the ejecta consist of the contents of the stomach, and thin, serous, watery fluid. The respiration is feeble, and there is a damp, cold, and parchment feel to the skin. The temperature, however, runs high, up to 103, 105, and even higher. There is a marked and characteristic relaxation of the cellular tissue, which gives a sunken and pinched appearance to the face. The fontanelle is very much depressed. The pulse is feeble and

rapid; the cry is weak and anxious. There is a restless, nervous, anxious expression of countenance. There is considerable thirst and scanty or suppressed urine. The prostration may become a collapse and death follow, or the case may rally, and then possibly develop into enterocolitis. This latter condition may be brought about by careless feeding. If so, the restlessness increases, the cry becomes sharp, the eye pearly and tense, and the zone of capillary congestion will appear about the cornea. This latter is to me an early and *unfailing* symptom of enteritis. The erythema about the buttocks noticed by Bouchut, and the colitis is a later and confirmatory manifestation.

Cholera infantum is an American disease. Few of the European authors write as if they had met it. They speak of cholera attacking children, but it is usually during an epidemic of Asiatic cholera. Meigs thinks he recognizes "the identity of some of the cases called by Billard follicular enteritis, by Burrier apyretic and febrile follicular diacrisis, by Rilliet and Barthez, in their second edition, choleriform gastro-intestinal catarrh, and by Copland the choleric fever of infants, with the true cholera infantum of America." Cholera infantum is not a catarrh, fever, nor inflammation, but is a sudden systemic poisoning, as we shall see.

II. ETIOLOGY.

Cholera infantum, being neither simple diarrhœa nor inflammatory diarrhœa, must differ from them etiologically. Simple diarrhœa is chiefly caused by indigestion, cold, and dentition, and is most frequent in early summer, although it is met at all seasons of the year. The chief causes of enterocolitis are improper nourishment, such as irritating starchy food, etc., neglected diarrhœa, and the heat of summer. It is most frequent in the latter part of summer.

As the chief exciting cause of simple diarrhœa is indigestion, so the chief exciting cause of cholera infantum is heat. There are perhaps, strictly speaking, three exciting causes of this disease: (1), great heat; (2), a negative electric condition of atmosphere; and (3), improper feeding.

I have come to look upon carbonic acid and cold in winter,

and carbonic acid and heat in summer, as the great causes of infantile mortality. The close similarity of cholera infantum to carbonic acid poisoning, lead me to conclude that that was the essential poison in the disease under consideration. I reasoned thus: The great heat and improper food generates in the system much carbonic acid, the electro-negative atmosphere prevents its elimination, and cholera infantum poisoning is the result.

In a study of cholera proper I had arrived at the conclusion (*vide Medical Investigator*, Sept., 1873), that it was due to the same combined causes, but some recent European (German) experiments have proven that, although on the right track, I did not get at all the factors in the problem. Dr. Horn (*vide Medical Investigator*, April and May, 1874), has come to the conclusion that the cholera poison is *cyanogen* (hydrocyanic acid, prussic acid). It is generated, he thinks, during very negative electric conditions of the atmosphere. We know there is more carbonic-acid gas in the atmosphere at such times, *e. g.*, during hot, moist, cloudy weather, than at other times when the sky is clear; and as four-fifths of the atmosphere is nitrogen, the formation of cyanogen (C_2N) would be favored during such electro-negative times. Again, the decay of all organic matter is also more rapid at such times, and from it would arise carbonic-acid gas, light carburetted hydrogen (CH_2), and nitrogen gas, and the chemical combination of these, under great heat, would easily give us hydrocyanic acid (HC_2N). How this is brought about in the system would be too much of a chemical digression to consider at this time.

I might state, however, that "when an organic substance, containing nitrogen and carbon, is heated, these elements will not unite directly; but if heated with alkaline metals, potassium or soda, in a glass tube out of contact of air, they instantly combine to form cyanogen." (*Brande & Taylor's Chemistry.*)

When these elements are decomposing under great heat, as in the intestines of a child on a hot day, in the presence of the alkaline bile, we have circumstances favorable for the generation of this terrible poison. Bednar considers the *fermentation* of the ingesta the sole cause of cholera morbus, and Neimeyer considers cholera infantum only a severe form of the above disease, or, as

he puts it, severe acute gastric catarrh. Then the generation of some sort of gas must be responsible for this disease. It corresponds closely to the effects of cyanogen.

The observed fact that cholera infantum is more severe during cholera seasons, leads us to believe that there is a close similarity of causes. During cholera seasons it has been observed that the atmosphere is much of the time electro-negative (*e. g.*, 1873). When, in addition, there is much organic matter decaying in a certain locality, there cholera has always prevailed most severely. And when by diet, drinking, and mode of life there is much carbonic acid in the system, those persons are the ones earliest attacked. These facts would give credence to Dr. Horn's idea, that cholera is hydrocyanic poisoning. The recent Munich epidemic confirms these facts.

The question might be asked, if cholera and cholera infantum are due to the same causes, then why do we have cases of the latter every summer? The answer is easy. Take such a delicate mass of organic matter as a young child, living on such highly organized nitrogenous food as milk, and we have a very favorable field for cholera infantum. Then having added great heat, and sudden electro-negative states of the atmosphere, and the prospect of an attack is most certain. If with this there is inattention to feeding, as giving milk slightly sour by standing, or the mother getting heated or angry, etc., the conditions for the generation of cyanogen in the infant system is too favorable to escape an attack of severe cholera infantum. Inattention to clothing, bathing, or ventilation, may often be the exciting cause of an attack also.

Cholera infantum is, I believe, a veritable asphyxia; and excessive acidity of the system is its essential cause. The chief seat of the irritation may be peripheral (intestinal), but when severe is no doubt central (cerebral). The force of the disease is spent not upon the bowels, but upon the brain and nerve-centres that supply the intestines directly with nervous filaments. The severe character of the diarrhœa and vomiting shows us that the nerve-centres are being severely irritated. The brain-sinuses are loaded with acid blood, which poisons the cerebral mass, and especially the quadrigemina, thalamus, and striated bodies. Brown-

Sequard found that irritation of these would produce marked disturbance of stomach and bowels, and in a similar way we infer this poison acts. The fatal collapse looks towards paralysis of these brain-centres.

The predisposing causes are local and constitutional. Local, as in a given city, town, country, and house, any place where decaying matter is abundant, and the gases being rapidly disseminated in the air; in cities where there are gutter sewers, as in Philadelphia, for example. It prevails most severely in similar localities in Chicago, *i. e.*, where there is surface drainage or none at all. Open cess-pools, stagnant water, limestone localities, and badly ventilated localities, cities, and houses, are very favorable predisposing causes. Hot localities, where there is not much chance for breezes, must predispose to this disease.

If atmospheric conditions have as much to do with the generation of this disease as I infer, then localities subject to sudden electric changes must be favorable to the development of cholera infantum. This I take it is *the* cause why cholera infantum is essentially an American disease. Our large continent, with its varied and peculiar topography, especially favors sudden, severe, and wide-spread electric disturbances of the atmosphere. This with the sudden bursts of great heat must affect in a violent manner children with such a highly developed sensational system as they possess. I would here call your attention to the fact that *feeling* is the first wide-awake sense in the infant. Therefore electrical changes must affect it very easily and early.

Another predisposition: many an American mother gives a milk neutral or slightly sour. Bursts of anger or heat will bring about this result. During hot weather very little of the cow's milk is decidedly alkaline, but is neutral or slightly sour.* Having all these predisposing causes, I am surprised that there is not a greater infant mortality from this disease.

We are entering a summer that will be marked by much electro-negative weather, and the inference is, we will see much of this disease. This is one reason why your bureau chose it for discussion.

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* We have verified this fact repeatedly at the Foundlings' Home, Chicago.

We vote for having electrical reports added to the present weather chronicles.

The class of children predisposed to this disease, are the plump, FLABBY, and *fair* children. The thin and scrawny are more disposed to indigestion and simple diarrhœa. The *rosy* and plump children are more disposed to inflammatory diarrhœa; the more blood and coloring matter in a child, the more the predisposition to the inflammatory diarrhœa, is my observation. A child that perspires much about the head is very predisposed to cholera infantum. This would suggest a psoric taint and a negative electric condition of system.

To sum it all up, the cause of cholera infantum is gases generated in the system from decomposing organic matter during hot negative electric states of the atmosphere. It is most prevalent in places where the predisposing causes are abundant, and most fatal in those children loosely organized. (The antidotes to hydrocyanic acid are Amm. carb., Camphor, Coffee, Ipecac, and Opium.)

Prophylactic moral: Keep the child and its food (or feeder) *sweet* and *cool*, and it will escape cholera infantum.

There are many points that might be elaborated, and that would come up in considering other parts of this subject, but time will not permit me to refer to them.

I should call special attention to attrition flour as a food for children.

II.

PATHOLOGY OF CHOLERA INFANTUM.

By N. R. Morse, M.D., Salem, Mass.

Preliminary to a brief discussion of the pathology of cholera infantum, it is proper to state that the data from which I could glean facts bearing upon this point are so meagre and incomplete, especially in that most important and interesting department of pathological histology or microscopy, and our investigations so limited, that I shall hardly be expected to present anything new, if I should be successful even in furnishing a tolerably accurate photograph of the pathological nature, morbid appearances, and causes of this dreaded disease, which annually visits the cities and larger towns of our country, and so often snatches the loved idol from our happy homes, leaving many a hearthstone desolate, and weeping hearts disconsolate.

First, let me define what I understand by cholera infantum, lest there should be some doubt in regard to the term often so indiscriminately used in "mortality reports," including as they often do all forms of bowel complaints.

Cholera infantum can best be defined by a somewhat extended enumeration of some of its characteristics. We shall note only some of the more prominent. It almost invariably occurs during the summer months (from June to October), in infants and young children teething, who were either in good health or, more frequently, were enfeebled from disease, either hereditary or acquired (particularly the children of scrofulous or tuberculous parents), who for an indefinite period have been subject to simple

or inflammatory diarrhœa. They have occasional nausea; spasmodic griping pains in the bowels; copious purging of a thin watery fluid, or of large fetid evacuations, followed by vomiting, more or less obstinate; coldness of a portion or the whole surface of the body, particularly the feet, limbs, and hands; coldness and lividity of the lips and tongue; pinched appearance of the nose; craving thirst; cold breath; a rapid but feeble pulse; extreme restlessness, with oppressed respiration; diminished or entirely suppressed secretion of urine; deathlike pallor of the countenance; livid cyanotic appearance of the whole surface of the body; enfeebled moaning cry; partial or entire aphonia, with collapse more or less complete, which may prove fatal in a few hours or be succeeded by reaction, and show a more or less protracted, simple, or inflammatory diarrhœa.

The fluidity and quantity of the stools are more characteristic of true cholera infantum than the vomiting, or the nature of the discharges in other respects.

I also note the following under the head of the pathological nature or appearance of the disease.

The emaciation of the little patient is very marked; his eyes are hollow, languid, and glassy; his countenance shrunken and shrivelled; his nose sharp and pointed, and his lips thin, pale, and attenuated; the surface of the body is cold and clammy, often covered with petechiæ; the tongue is smooth, of dark color, and shining, or else covered with aphthæ, as well as the walls of the mouth. The child in most cases lies in a semi-doze, and so insensible that flies will alight upon its half closed eyelids, without showing the least sign of its being conscious of their presence.

The fauces are often so dry, and produce such a feeling of uneasiness, that the little sufferer is led to thrust his fist deep down into his mouth, as if to clear away some offending matter.

The abdomen generally becomes more or less tympanitic, and the limbs and feet of a leaden hue, or else pallid and œdematous.

Cholera infantum usually runs a rapid course in enfeebled children afflicted with hereditary tendencies, and in robust healthy children with no hereditary taint it is of very variable duration. The brain is often affected from the first, or follows

immediately upon the very profuse emesis, and dejection, which frequently usher in the dreaded scourge.

I, myself, have seen infants thus die in from twelve to twenty-four hours from the first attack of the disease, which was most violent and profuse, both up and down, the little ones wasting entirely away in a few hours, and death following either from coma, preceded by convulsions with paralysis of the brain, or with all the symptoms of acute meningitis.

In protracted cases occasionally an eruption of minute white vesicles appears upon the neck and chest, which symptom augurs no more favorable issue, though not a fatal one, as some medical men have asserted. Not infrequently the disease lasts for many days and even weeks; especially is this the case when left to nature or "old school treatment;" the patient gradually sinks from apparently a total cessation of the powers of the nutritive system.

It will be plainly seen from the above characteristics, which attend with more or less regularity every case of cholera infantum, that we have no easy task before us, if we are to specify the exact lesions and pathology of the same. Moreover, I find that investigations by the aid of the microscope are so meagre in this disease, that they throw but very little light upon the nature and character of the lesions there found.

Sufficient data are afforded, however, to enable me to assert with confidence, that the true cause or causes of death lie not in the morbid changes which occur in the serous and mucous coats of the intestines, but rather, if not invariably, to a profound alteration in the amount and flow of the liquid and morbid products of the secretions and excretions, thereby producing in a few hours an anæmic condition of the brain and spinal cord, as well as an altered secretion of the urine or entire suppression thereof, which alone may be sufficient to produce fatal uræmic poisoning and convulsions, followed by a complete paralysis of the brain and nerve-centres, and consequently death in a shorter or longer period, depending upon the existing cause, age, strength, constitution, hereditary tendencies, and severity of the attack.

From the recorded observations of MM. Billard, Bertin, and Rilliet and Barthez, I find that they all agree that in the more mild forms of the disease known as inflammatory diarrhœa

or gastro-intestinal disease, a certain proportion, about one case in twelve, occurred, in which no appreciable lesion of the digestive tract or tube could be detected. The above conclusion was reached by a careful comparison of more than three hundred autopsies made by them. In every case an altered appearance of the secretions was found.

The anatomical lesions which appear the most constant, are to be found in the large intestines and in the ileum, and they consist according to Niemeyer of "swelling, redness, relaxation, and friability of the mucous membranes," which is sometimes diffuse, at others limited to the vicinity of the solitary glands and of Peyer's patches, and a serous infiltration of the submucous tissue.

"Swelling of the solitary glands and the glands of Peyer is an almost constant appearance; they distinctly project above the surface of the mucous membrane. The mesenteric glands also are usually found hyperæmic and somewhat enlarged. The contents of the intestines consist at first of plentiful serous fluid, and mixed with detached epithelial and young cells; subsequently of a cloudy mucus, which is adherent to the walls of the intestines, and contains epithelial structures."

The special pathology of this disease is still involved in much doubt, although we may be very well acquainted with the physical phenomena or conditions upon which it most frequently appears and is developed, namely, in *infancy*. During the period of dentition, the high temperature of the summer, the use of improper food, residence in cities, particularly in crowded filthy streets, narrow courts and alleys, where a whole family occupy one or two rooms only, especially in cellars or badly ventilated rooms, where the sunlight never or rarely enters, and noxious exhalations from decaying vegetable matter, filth and dirt of all kinds are continually arising.

Such conditions and localities are the most fruitful sources of the disease; but *how* these conditions act to produce their effects is still a matter of doubt.

To speculate or reason upon such data seems an almost useless task, when the question to be answered pertains to morbid changes and alterations going on in the most delicate and deep-seated organs, tissues, and nerves in the human system.

We are still wanting in what is most needed, careful microscopical examination of all the execreta, especially as to the changing condition of the epithelium of the mucous membrane of the bowels, the altered condition of the blood, urine, etc.

We believe that such examinations would reveal much that would be of the highest value in a sanitary point of view, aside from the gratification which would result therefrom, by learning something more explicit in reference to the morbid alterations of nutrition and the entire blood-mass, as well as the local irritant action of the morbid contents of the stomach and intestines.

That the disease is catarrhal in its origin and nature, is demonstrated by the fact that the causes which produce it are those of all other catarrhs, namely, improper alimentation, endemic causes, epidemic influences, etc.

Also by the analogy of the symptoms, by the progress of mild into graver forms through intermediate cases, and, finally, by the fact that simple intestinal catarrh is often the forerunner and prodrome of cholera infantum.

Acknowledging that the disease is of catarrhal origin, we realize a modification of the whole economy, as well as a changed condition of the blood and excretions.

The disease occurring at the period of dentition, the age in which the physiological and functional derangements of the nervous system, without lesions of organs, are most frequent, will in part account for the rapid and profound changes which occur in nutrition, circulation, and calorification, oftentimes out of all proportion to the material waste observed, as seen in those cases proving fatal within a few hours from the commencement of the disease.

How shall we account for this profound waste of material and vitality, except by the fact that the disease, being seated in the bowels, the inflammation envelops the ganglia of the great sympathetic nerve.

That this nerve has the power of regulating the calibre of the arteries by inducing contraction, or allowing relaxation of their muscular coat, has been established by experimentation during the past few years in vivisections of the lower animals, and thus we may be prepared the better to understand how the symptoms

of cholera collapse may be accounted for by the supposition of a widespread powerful irritation of the fibres of the sympathetic nerve, so abundantly distributed to the coats of the vessels throughout the alimentary tract, and which have such close connection with the nervous supply of the whole arterial system, as well as the heart and lungs.

I may in this way readily explain the cause of the small thready pulse; the cold, pale, and shrivelled appearance of the skin; the asphyxia and coldness of the breath; the diminution in the production of urea and the secretion of urine; the restless, disturbed sleep; half-closed, sunken eyes and cheeks; and, in fact, the whole morbid pathological picture, till the child falls into a comatose or semi-comatose condition, and death follows quietly or is preceded by convulsive movements.

As a résumé of the pathology of this disease, we shall set forth two broad generalizations, which, we think, will be generally accepted as true, 1. That unhealthy and improper food, which is unfit to furnish the body what it needs for the purposes of nutrition, such as farinaceous food, or unhealthy, decomposing milk, etc., is quite sure to produce the disease, no matter how favorable in all other respects may be the situation and surroundings of the infant.

2. That the best breast-milk in the universe, or the most carefully prepared artificial diet that the chemist can suggest or a mother's love provide, cannot save the little one from the dreaded scourge, who is shut up in an ill-ventilated house or cellar, in a narrow, dirty, filthy street in a large city, during the hot weather, where the pure sunlight of heaven rarely if ever enters.

The heat to which the child is exposed, the heavy damp air, pregnant with foul exhalations, which it breathes, determines a morbid state of health, in which the digestive organs can no longer perform their healthful functions. In both instances the same result is accomplished, namely, in the first the organs of digestion cannot change the originally improper nature and character of the food into healthy material for nutrition; in the second the enfeebled and diseased organs have lost their power to digest even proper and healthful food.

In both instances the alimentary tract is crowded with the

débris of unfit and improperly digested food, which acts as a local irritant to the mucous membrane, and thus determines in some measure the tissue changes there found.

Moreover, some morbid alteration takes place in the condition of the blood, which of itself gives rise to changes in the mucous membrane through the unhealthy action of the diseased blood on the nervous system, particularly the sympathetic, and thus most likely follow the resultant effects so often noticed in cholera infantum as the direct consequence of the two trains of diseased action thus set in motion, namely, the local and general.

III.

THERAPEUTICS OF CHOLERA INFANTUM.

By Henry Noah Martin, M.D., Philadelphia, Pa.

If in these remarks on cholera infantum I shall differ with my colleagues as to its pathology, diagnosis, and prognosis, I hope I may be acquitted of any desire to appear singular, or to set up opinions different from theirs.

An investigation of the subject, as treated of by nearly all homœopaths as well as allopaths, seems to envelop it in obscure generalities, and one is forced at last to depend upon his own ideas and experience regarding it.

Jahr designates it as *cholera infantum* or *summer complaint*, and says: "In most cases which do not proceed from a more deepseated organic affection, such as softening of the stomach or incipient hydrocephaloid, but which owe their existence to purely accidental causes, such as a cold, derangement of the stomach, or atmospheric influences," etc. He then proceeds to prescribe some medicines for "yellowish and very offensive" evacuations, and finally refers his reader to another page for special indications amongst a mass of symptoms of every conceivable form of diarrhœa and dysentery. These are very valuable and reliable—as Jahr always is in his symptomatic indications of medicines—but very confusing to the young practitioner, who may wish to form a correct diagnosis for his own satisfaction or that of the friends, or, as is unfortunately the case sometimes, for a death certificate for the board of health.

Raue also treats of it as though synonymous with summer

complaint, and describes the discharges as "whitish, ash-colored, or yellowish, changing into green or greenish, and having sometimes a very penetrating, and at other times a peculiar sweetish, fresh smell." He says, also, that if the disease continues the child becomes anæmic, and "has symptoms of hydrocephalus." He further says: "The child grows restless; utters now and then plaintive cries; rolls the head; commences squinting, and falls into stupor, a state of things which Marshall Hall has called '*hydrocephaloid*,' in contradistinction to hydrocephalus acutus, which is of an inflammatory nature.

"This complaint, generally occurring during the period of dentition, most probably has its deepest cause in the rapid growth of the brain at that time when it needs for its development an abundance of fresh air. We see, therefore, that a change of air alone sometimes recruits the little sufferer."

I have quoted nearly all this distinguished author says about it, yet there is nothing stated which, to my mind, conveys the least semblance of cholera infantum. It seems to be a short and concise statement of the leading symptoms which distinguish teething diarrhœa.

The remedies recommended are *Æthusa*, *Borax*, *Calc. c.*, *Calc. phos.*, *Creasote*, and *Natr. mur.* He then recommends a comparison with some others. The medicines mentioned are seldom indicated in cholera infantum, yet they are among those most valuable in dentition diarrhœa.

Bœhr, in his *Science of Therapeutics*, describes it as synonymous with "*chronic intestinal catarrh*," "*chronic diarrhœa*," "*summer complaint.*" The medicines recommended are in accordance with that idea, viz., *Nux vom.*, *Hyos.*, *Graphites*, etc.

Guernsey, in his valuable work on Obstetrics, gives, in the main, an excellent description of this disease, and does not fall into the error of classifying and describing indigestion, gastritis, enteritis, marasmus, teething diarrhœa, or summer complaint, under the head of cholera infantum.

He says: "This disease very often proves fatal, even under the best of treatment, since it appears usually in the latter part of the summer, when the young infant's system is already somewhat exhausted by the previous heat; when the air is impure,

and the weather sultry, or warm and damp; and since it seems to spring up as an epidemic from some atmospheric miasm, which is little less than malignant. . . . . .

"In *cholera infantum* the *vomiting and diarrhœa* form the most remarkable symptom. The stomach is so irritable that it rejects immediately, and sometimes with violence, everything which it receives; in the advanced stages of the disorder the vomiting becomes spontaneous, and the fluids ejected resemble those thrown off from the bowels. The discharges from the bowels are ordinarily composed entirely of a perfectly colorless and inodorous fluid, often containing minute mucous flocculi. These stools are discharged without the least effort, sometimes unconsciously. In some cases, however, they are very small in quantity, and are squirted from the anus as if from a syringe. In such cases there is usually more or less tormina and tenesmus. Sometimes the stomach seems to lose its irritability and to allow whatever food or drink is taken in to pass through both it and the intestines unchanged, and to be immediately thrown off from the bowels in the same condition. But the extreme languor, and prostration, and rapid emaciation, are as characteristic of this affection in infants and very young children as of the corresponding Asiatic cholera in adults."

Notwithstanding the author takes, as I believe, a more correct view of cholera infantum than any other homœopathic author I have read, acknowledging it to be a disease in "young children *corresponding* to Asiatic cholera in adults," yet he states that the stomach sometimes loses its irritability, and allows the food to pass through undigested—a condition of things seldom, if ever, seen in Asiatic cholera. This looks more like marasmus, which he seems to confound with *cholera infantum*. This is, however, no doubt, an inadvertence.

The symptoms quoted from Watson seem to have not the remotest resemblance to true *cholera infantum*.

After making these extensive quotations from various authors, one is led to inquire: What is cholera infantum?

I believe it to be nothing else than what its name indicates, and what Dr. Guernsey has stated, viz.: a disease attacking children, corresponding to Asiatic cholera of adults.

It is characterized by great suddenness of attack, sometimes following a diarrhœa of short duration; inodorous discharges from bowels and stomach, profuse, watery, flocculent, like "rice water;" suppression of urine partial or complete; sudden emaciation; blue cold skin, shrivelled like a washerwoman's hand; sunken features and abdomen; great thirst, with inability to retain water; violent cramping of all the muscular system. Such cases are undoubtedly rare, and so I believe is cholera infantum, except where our little ones are stricken down by an epidemic similar to epidemics of Asiatic cholera.

I have had large experience in the treatment of children, and I confess to have seen but very few cases of cholera infantum. I call to mind at this moment one true case of this disease.

An infant less than one year old was attacked in the night, following a very hot summer's day, with vomiting and purging. The parents were young and inexperienced, and did not know the dangerous character of the attack. Nothing was done to relieve the little sufferer but to change its diapers. As there was but little pain and no bad smell, no danger was apprehended; but when the mother awakened after daylight and looked at the child, it had so changed as to be unlike the child of the night before. I was immediately called, and within a half hour I was beside its little cot; but death had already claimed its victim, and within a few minutes its innocent soul winged its flight to a better world. This was cholera infantum. There was no "dirty brownish hue" of the skin, "covered with petechiæ;" no "aphthæ on the parietes of the mouth;" no "tympanitic abdomen and œdematous hands and feet;" no thrusting of "the hand deep into the mouth;" no "symptoms of acute meningitis," as Watson, quoted by Guernsey, describes the disease. Nor was there the "yellowish and very offensive evacuations" which Jahr ascribes to this affection, but which really belong to quite another form of children's disease. Nor did we have the "green or greenish" stools having a "very penetrating" odor, as described by Raue. No; these are not the kind of stools found in *true* cholera infantum.

Having great respect for these authors, I hope not to incur their displeasure, if I am obliged to differ from them in these respects.

TREATMENT.—Our remedies for this truly frightful disease are but very few, and they are the same as are used for cholera Asiatica in adults. Guernsey has given the characteristics of a large number of medicines under the head of cholera infantum; but an analysis of these symptoms will impress on our minds how *very* few of them are really indicated for this scourge.

Antimonium c.—"White coating on the tongue; nausea, retching, *coughing—sometimes* vomiting and watery diarrhœa." This certainly is *not* cholera infantum, but possibly gastric irritation.

We often meet cases of children who have similar symptoms after being bathed. Such children are almost sure to grow up dyspeptics, if not cured of the constitutional tendency with *Antim. crud.*

Arsenicum.—"The child is very weak; the slightest effort seems to exhaust it, such as vomiting, etc. Intense thirst, with vomiting, immediately after drinking. Vomiting and purging at the same time. Coldness of the extremities; worse after midnight."

In addition to these symptoms, given by Guernsey, Arsenicum has suppression of urine, which is also characteristic of cholera. Also the sunken countenance; pale, lead-colored, or bluish death-colored face. It has also the whitish inodorous stools, peculiar to cholera, although it must be conceded that brownish, watery, and *very* offensive stools are more characteristic of it; hence its great efficacy in the gastro-intestinal irritation of children, commonly called summer complaint, which is frequently caused by the improper use of fruit.

Bryonia.—"When hot weather seems to develop the attack, the child vomits its ingesta immediately. Lumpy diarrhœa; colic, with much thirst; lips dry and thirst."

In these symptoms we recognize nothing like cholera infantum, but rather a catarrhal affection of the digestive tract. It is induced by exposure to drafts of air during very hot weather, and the brunt of the attack, owing to constitutional tendencies, is upon the mucous membranes rather than upon the arterial system, as is the case with Aconite.

Calcarea carb.—"In leucophlegmatic children during teething. Swelling and hardness of the abdomen; flabby muscles;

skin dry and shrivelled; hair dry, with the hair looking like tow."

Here he makes no mention of the peculiarity of stools, which are light yellow, or more often whitish, having a fetid, sourish smell.

A true teething diarrhœa for which Calcarea is almost specific. A profuse sweating of the head is an almost constant symptom, and seems to indicate a soft condition of the bones, lack of lime in them. Such children are liable to have bow-legs, or rickets. The swelling of the abdomen may be caused by a collection of gas, but it is frequently consequent upon an enlarged mesentery. From the impaired state of digestion we find undigested stools. But this pathological state is not cholera infantum.

Camphor.—"The skin is cold as marble, yet the child will not remain covered; much prostration and diarrhœa. Sometimes these cold spells only come on at night, and pass off in the morning."

This is a true cholera infantum medicine, possessing very many of the characteristics of that disease.

The face is pale and deathlike, icy cold and distorted, eyes staring and sunken, upper lip drawn up—risus sardonicus; thirst violent; stools scanty but involuntary; icy coldness of the body, with cramps in the calves of the legs.

The "cold spells," which "come on at night and pass off in the morning," are more cheracteristic of intermittent or congestive chills than of any type of cholera.

Carbo veg.—"Similar to Bryonia. May be used when that remedy appears to be indicated, but fails to cure."

That Carbo veg. might be indicated in a simple gastric irritation, with eructations of gas and vomiting of food, with distension of the stomach and colic, where Bryonia had failed to cure, may be readily admitted, but Carbo veg. has a more significant action when cholera infantum is involved.

When the loss of the serum of the blood has exhausted the little sufferer, collapse is impending, the heart's action is weak, and the whole sympathetic system is on the verge of paralysis—if I may so speak—then this all-powerful agent reaches down almost into the grave and rescues the patient.

Bryonia has no such saving power. This elementary sub-

stance, carbon, which by its various combinations forms a substance to warm our bodies, a gas to illuminate, an acid and an oxide which is death to animal life to breathe, and health to vegetable life when imbibed, which forms the basis of inorganic existence in one of the earliest periods of the world's creation, which came so early from the hand of an all-powerful God, we might have reason to expect would reach the very elements of disease, and thus play an important part in saving life when endangered.

China.—"Very flatulent diarrhœa, containing portions of the ingesta, stools fetid, and occurring immediately after eating. Partaking of fruit may have been the cause of the attack."

It is plain that these symptoms do not resemble those of cholera infantum.

We have what might be called a reflex diarrhœa with tendency to marasmus.

Croton tig.—"The stool occurs suddenly,—one gush and it is finished."

Here again is reflex action, for, to complete the group of symptoms, it is characteristic of Croton tig. that a sudden gush from the bowels immediately follows the first mouthful of food or water taken.

A druggist's clerk, who was a student at the University of Pennsylvania, having the above-noted symptoms, took, at my suggestion, one dose of the tenth of a drop of croton oil. He had been suffering for two weeks, but after taking one dose he was well in six hours, showing conclusively that there was nothing but a state of irritation of the stomach present, or so quick a recovery would not have followed.

Dulcamara.—"Every cool change in the weather, or an unusually cool night causes a relapse; or such condition of the weather appears to cause the attack at its first onset."

Students and young practitioners should be warned against relying upon this medicine in cholera or cholera infantum.

A young physician, during an epidemic of Asiatic cholera, was called to such a case occurring in the night following a cool damp change in the weather, and relying on that fact as an indication he gave Dulcamara. Valuable time was thus lost, and a

valuable life also, thus showing the danger from prescribing for one symptom a medicine which had no pathological relation to the disease.

Gratiola.—"Violent vomiting and purging of yellow substance, and much flatulency."

Our provings of Gratiola present no semblance of cholera.

Ipecacuanha.—"*Much nausea* and vomiting, or almost constant nausea,—these symptoms predominate. Watery diarrhœa, or green, or still more particularly, fermented stools."

This medicine bears many strong points of resemblance to cholera.

It has the peculiar appearance of face, with icy coldness of the skin, rice-water discharges, etc.

Mercurius sol.—"The child has colic, slimy, and sometimes bloody stools, with tenesmus, the colic being relieved immediately after the stool. There is often much perspiration, particularly upon the thighs, where it is cold and clammy. The child is worse in the early part of the night, and is very weak."

We have in this group of symptoms a good picture of dysentery, but is there the slightest resemblance to cholera infantum?

Does dysentery resemble cholera infantum in the slightest degree? Certainly cholera infantum has no slimy, bloody stools, with tenesmus, perspiration, etc.

Nux vomica.—"In cases where some marked error of diet has caused indigestion, or we may think of Nux after Ipecac has failed."

Nux is certainly like Mercurius, one of our best medicines for dysentery, and as Guernsey says, for indigestion; but indigestion is not cholera infantum.

Podophyllum pelt.—"Exceedingly offensive stools, which are most frequent in the morning; moaning during sleep, with half-closed eyes, and rolling the head from side to side."

We have hardly any medicine superior to this for the ordinary summer complaint or teething diarrhœa of children. It seems to divide the palm with Arsenicum, hence, when the stools are greenish, watery, and very offensive, many physicians alternate them; but if cholera infantum is what Dr. Guernsey describes it, and what we believe it to be, Podophyllum cannot be indicated for it.

Secale cor.—"Great debility, vomiting, and diarrhœa; much thirst; pale face, sunken eyes, dry heat, quick pulse, restlessness, and sleeplessness."

Undoubtedly this medicine is sometimes indicated in cholera infantum, but it is more frequently indicated in gangrenous and disorganized states of the blood, or typhoid conditions. In cases threatening to be fatal, we have the pale sunken face, with blue rings around the eyes and dry cold skin, as markedly as in cholera infantum; but a very different pathological process is going on.

The most marked characteristic of Secale is, the great desire *to be uncovered while the skin is icy cold.* We believe it to be more characteristic of Secale than of Camphor.

We might more properly say, perhaps, that this symptom is characteristic of Secale in typhus, and of camphor in cholera infantum.

Sulphur.—"When there are repeated relapses, or when the case seems to linger, with excoriations, redness about the anus, eruptions, weak spells, sleeps with frequent wakings."

An incongruous group of symptoms is here given, such as could never be found in cholera infantum, and seldom in any of the diarrhœas of children, except what might be called scrofulous forms.

Sulphur is, however, one of our best medicines, not only for cholera infantum, but for Asiatic cholera; but the symptoms above are not such symptoms as are developed by these diseases.

Veratrum alb.—"The least motion increases the nausea, cold sweat on the forehead, from vomiting, with great prostration. Pulse almost imperceptible. The least quantity of liquid excites vomiting, which is followed by cold sweat on the forehead. Prostration, with cold sweat and cold breath."

Probably no medicine equals Veratrum in true cholera infantum. It has in the superlative degree all the characteristic symptoms of Asiatic cholera as we meet with it in this country.

There are at least two other medicines that deserve to be mentioned in connection with this disease, and they are *Cuprum acet.* and *Jatropha curcas.*

Cuprum has fixed, turned upwards, sunken eyes; bluish face

and lips, with distorted features; coldness of the tongue and breath; vomiting of water containing flakes; cramps of the whole muscular system; rice-water discharges from the bowels; suppression of the urine; coldness of the arms and legs, and great prostration.

Jatropha curcas has indifference to his condition, a very characteristic mental state in this disease; pale face with blue margins around the eyes; violent thirst; vomiting of large quantities of watery substance, with watery diarrhœa, preceded by rumbling in the abdomen like water poured out of a bottle; cramps and burning in the stomach; cramps in the calves of the legs, and coldness of the whole body. The water gushes from the patient like a torrent; he is very much prostrated, and has cold hands with blueness of the fingers and finger-nails.

PROGNOSIS.—This is much more unfavorable than in the corresponding disease, Asiatic cholera of adults, for it attacks children under five years of age, who cannot withstand such a malignant disease so successfully as the more matured system can.

If recovery takes place it is necessarily slow, and sequelæ are apt to follow, such as typhoid states, dysentery, and sometimes even a lingering diarrhœa. In such cases some of the medicines quoted from Dr. Guernsey's work will be useful according to the indications given by him.

These remarks are written not for the purpose of criticizing the work of others, but rather to show the distinctive differences between this disease, which is claimed to be analogous to Asiatic cholera, and the various forms of so-called "summer complaint," which are commonly, and as I believe erroneously, called cholera infantum. At the same time, while it is claimed that its pathology is substantially the same as that of Asiatic cholera, it is not denied that, since it attacks young children during the period of dentition, etc., the symptoms are sometimes so modified as to take on some of the appearances of the other forms of disease mentioned.

The distinctive features of the disease are, however, the very profuse watery ejections and dejections, the suppression of urine, rapid prostration, and collapse.

IV.

SUGGESTIONS

RESPECTING THE

INFLUENCE OF FUNCTIONAL ACTIVITY OF THE REPRODUCTIVE SYSTEM

ON LACTATION AND THE NUTRITION OF INFANTS.

By G. H. Wilson, M D., West Meriden, Conn.

So long as rearing children shall continue to be a legitimate branch of industry by our intellectual sisters, the subject of infant food cannot lose its interest nor grow less, I apprehend, if they be reared by proxy, or, as it is expressively termed, by hand.

The growth and health, the bodily and mental constitution, are so often impaired or ruined by vicious nutrition, that no small part of our business is to arrest its ravages.

In the case of the healthy mother, nature seems to have taken its modes and measures out of our hands so wisely and successfully indeed, that we readily pardon that ruler of us all, parent as well as physician, the monthly nurse, when she offers us her proverbial panacea for all the ills of a young child, "a good breast of milk." A good wet-nurse, to take the place of the fashionable or feeble mother, is always in demand.

In contrast with the well-fed nursling of a healthy mother, we too often meet the skinny victim of erroneous feeding, whose little life can span a cluster of ills sufficient to punish it for the faults of its parents, if not of its other relations.

The diseases of the child are often called simple, though very trying to the patience of the physician; they may be classed as indigestion in its differing degrees, from "wind on the stomach" down to cholera infantum and marasmus.

The ingenuity of genius has been exhausted on the invention of infantile food, some substitute for the food provided by nature, and given us an endless round of unsatisfactory starches, too expensive for use by the poor, successfully taken into the houses of the rich and of their followers, but not into the stomach of the child.

The object of this paper is to assist in the discovery of the cause for the very frequent failure of milk as a nutriment, and, so far as possible, to remove the necessity for substituting, in any but exceptional cases, such compounds of barley, wheat flour, oatmeal, boiled potatoes, malt, and, perhaps, wine and magnesia, for the milk whenever it "disagrees" or does not "set."

We cannot deny that, in rare instances, children have been successfully reared on these things, and, as temporary changes, are often of service.

Not to waste the time of the Institute on anything that has been better said before, nor to touch the subject of infantile disease, *per se*, I come to the one point, which bears a close relation to cholera infantum, and of such importance that I have called your attention to it, viz., the effect of functional activity of the sexual organs of the female on the lacteal secretion.

A very common observation is, that the occurrence of pregnancy in a nursing woman is followed by the usual symptomatic train of indigestion in the child and the necessity of weaning it.

The same effect often follows the return of menstruation, or capability of impregnation. Even a periodical increase of leucorrhœa in the nurse leads to indigestion in the child. The milk, in the above conditions, may be repugnant to the delicate taste of the child, when it refuses to take the breast, and even completely weans itself.

Then a change to goat's or cow's milk is the result, with a liability to similar trouble, for the change is not invariably a cure; or, if it prove so, the *disease*, as we call it, recurs sooner or later. As every one knows, the "bottle-baby" has a hard

fight for life through the "summer months," "the hot weather," "the dog-days," to name which is supposed to explain the irremediable cause of trouble. But, after making due allowance for overfeeding, bad air, water, etc., the child is still sick, or gets sick in about two weeks, and sooner if fed on mixed milk, and lives in town and is served by the milkman.

If fed on the milk of a single cow, of three or four months' lactation, it will not escape. A change to another cow, like a fresh breast, alleviates or removes the trouble for a while. The new milk-cow proves satisfactory for the longest time; she, however, becomes recreant to her maternal function, and we thence enter the realm of substitutes, or, more practically, inquire of the herdsman as to the condition of his cows. He will inform you that the warm months, July, August, and September, cover the earlier period of pregnancy in the cow; that condition usually commencing between the middle of May and the 1st of August, being the corresponding period of disturbance at about the "sixth week," as in the human female. The next choice falls on the milk of the cow kept farrow; but it is subject to periodical variations in quality similar to that of the woman in the later period of nursing. The peculiarity in this second corroboration of the above view is, that the aggravation of the child's symptoms occur in bi-weekly instead of monthly intervals, and continue two or three days, corresponding precisely with the periods of salacity in the cow.

At this point I will refer to the very common idea, the supposed lunar influence on the function of lactation and the condition of the nursing child. It may be, as some say, a mere superstition. It is true there is a sad want of uniformity in rules under the lunar system of nursing, weaning, etc., as some do in the "new of the moon" what others do in the "old." Yet I am not prepared to say there is no reason for associating the rites of ancient Isis, the changes of the moon, and the reproductive functions of the female, human or animal, in a common bond of relationship.

At least a hint may be taken from the fact, and the tradition supplemented by our acuter observation of the intimate sympathy existing between ovary and mammæ, which will at last force the

conclusion that the functional activities of these two organs are incompatible, and that the great cause of the lienteria of infants fed on milk, human or bovine, is one of reproductive interference.

The chemical nature of these changes is a very important matter, which I hope will be laid before the Institute by some competent chemist; and if any satisfactory substitute or alterative is ever offered, it will be one that will supplement the digestive power of the infant's stomach, or neutralize the deleterious caseous alteration.

But at present, recognizing the character and time of these changes, we may properly restrain and govern the regimen of our little patients accordingly; applying the same rule of avoidance or change to the use of milk of all kinds.

Personally I have practiced great care in this matter for many years, with the result as I think of saving life, and what was much to the ease of my conscience, avoiding an indefinite number of unsatisfactory prescriptions, of which numerous cases might be cited if desired.

My practical rules need hardly be mentioned: 1st. Use the milk of a healthy mother; or 2d, of a wet nurse; 3d, a new milch cow or goat; 4th, a farrow cow.

Avoid, 1st *a*, the milk of a pregnant, *b*, and omit during the period that of a menstruous woman.

Avoid, 2d *a*, the milk of a pregnant, *b*, and omit (for two or three days) that of a salacious cow.

APPENDIX.

DISCUSSIONS.

[Second Day—Evening Session.]

F. R. McMANUS, M.D., Baltimore, Md.: Mr. President: As a member of this bureau I regretted not having had time to prepare a paper on the appointed subject, but having listened to the able reports of my colleagues, I no longer do so; and I may say that in the main I agree with what they have written. During the past thirty-six years of my practice, which has been homœopathic during that time, I have been much more successful in the treatment of cholera infantum than I used to be when I administered opium, chalk, calomel, etc., as an old school practitioner. It is remarkable that although children may be cutting teeth during the winter, and suffering much therefrom, and even have an accompanying diarrhœa, yet cholera infantum is not observed, and only occurs during the hot summer months. I have often thought that the predisposing cause of this disease was the same as that to which I attributed the Asiatic cholera, viz., a deficiency of oxygen in the atmosphere. I remember that in 1832, I was called at midnight to see a man who was a night-worker at a lead factory, and who had suddenly been taken ill. I saw him at once. In an hour from the time he was seized he was in a state of collapse, and had all the concomitants of a well-marked case of Asiatic cholera. While I was detained with this patient, I had a conversation with the foreman of the works, who told me there was something very singular about the state of the atmosphere; that they ordinarily completed the making and finishing out of a chamber of sulphuric acid in twenty-one days, and that at that time a chamber was then in hand that had been undergoing the process of making for six weeks, and was then not completed, which he attributed to a deficiency of the oxygen in the air. To this deficiency of oxygen in the air, I attribute, as the predisposing cause, the cholera infantum, as it occurs in the summer. The exciting cause may be found in the great heat, improper food, insufficient nutrition, or the irritation of dentition. When I am called to a case of cholera infantum, I order the child to be taken to the country, where it can have plenty of

fresh and pure air, and I enjoin upon the parents the importance of doing this at once. This measure, together with a few doses of the appropriate remedy, generally sets the child to rights in a few days. I think the less medicine the child has the better for it, and the sooner it gets into the country, to good, wholesome air, the sooner it will get well.

G. H. WILSON, M.D., West Meriden, Conn., then gave a synopsis of his paper on the Nutrition of Infants.

DAVID THAYER, M.D., Boston Mass.: I wish to say just a few words on this important subject. The cholera infantum we have in the Eastern States is usually called summer complaint, and authors have not done much to clear away the confusion that exists regarding the names of this scourge of infancy. But as to the treatment, there are two points on which I always insist, viz., after giving a dose of Aconite, which answers in ninety-nine cases out of a hundred as the first remedy, I direct that the child be bathed in cold water every day, sponged all over; and I order that all the flies be driven from the room in which the sick child is confined. The flies are a great annoyance to the child, and getting rid of them is a very important matter, in my estimation. I have treated a large number of children affected with cholera infantum, and I think I have treated them very successfully, having lost but two cases in 1870, one in 1871, and one in 1872, and I have always observed these two points with the greatest of care. I hope that during the coming season I will not lose any case, and I shall do my best to avoid doing so. For some time I have been watching the action of the so-called "high potencies." Like many of you I was a low dilutionist, I may say an extremely low dilutionist, and I had little or no faith in the action of the high preparations. But I have been experimenting with them for some time, and carefully watching those experiments; and I have become convinced, not only that they act, but that they act much more quickly and powerfully than low potencies, and especially in the diseases of children. I gave very few medicines lower than the 200th to children last summer; and during the coming season I expect to give nothing lower than the 200th, and hope to be able to report having had no deaths from cholera infantum. Aconite is not the only medicine I use, but I have found that the advice of the late Dr. B. F. Joslin, of New York, viz., to give Aconite at first, is very good. Afterwards I give other remedies, and last summer I prescribed beside Aconite, Belladonna, Arsenicum, Veratrum alb., Cuprum, Sulphur, etc.

As for babies' food, I am inclined to think that a milk diet is not always the best for them, and especially during the hottest

summer weather. Scraped raw beef is highly recommended, and is excellent, and many a child in New England has been cured of the "summer complaint" by a teaspoonful of the raw and scraped beef. You may be astonished at hearing it, but it is nevertheless true, that there is no product of the garden so good for babies in times of cholera infantum as a cucumber; this has been proven by more than one physician of my vicinity.

WILLIAM OWENS, M.D., Cincinnati, O.: I have some statistics of the occurrence and mortality of cholera infantum in Cincinnati, which go to show that the prevalence of and mortality from this disease was not greater during the prevalence of the cholera epidemic of 1873 than for two or three years preceding; in fact, the deaths from cholera infantum in that city, during the year 1873, were fewer in proportion to the population and general mortality than in 1871. I have examined a table showing the mortality from this disease in the different wards of Cincinnati, and that table shows, not as you would expect to find it, that the mortality was greatest among the homes of the poor, where air was foul, and food poor, and surroundings unfavorable, but greatest where the well to do and the rich dwell, where the air is purer, and there is no deprivation of proper food and of the comforts of life. This seems to show that it is not to these things, then, that cholera infantum chiefly looks for its maintenance, and we must look elsewhere. I am inclined to think there has been an error just here, regarding the true pathology of the disease, and it is for the purpose of calling attention to this that I have referred to these statistics. It is alleged by most writers that this is a disease occurring in hot weather, and consisting essentially of a diseased condition of the digestive apparatus, and to be the result of some alteration, functional or organic, of the digestive organs. With these opinions I beg leave to differ. The facts I have just alluded to, and many others of a similar character, point to the conclusion that cholera infantum prevails most where there is the higher development of the nervous system, a development which not only renders the person more liable to disease, but is of itself the cause of disease; and in this case the disease influence effects its purpose through the nerves spread upon and through the alimentary canal, which are in a condition of receptivity constituting the predisposing cause, and then comes the exciting cause, as prostration from excessive heat, insufficient nutrition, errors of diet, etc. That this is true is partially proved by the fact that, of several children exposed to the same influences, even to the same error of diet, not all will take cholera infantum, and even the child that to-day may be dying of cholera infantum may have been

subjected before to a similar exciting cause, but the predisposition, in the shape of increased susceptibility of the nervous system, did not then exist, and the child was not affected. And, indeed, the prodromic and premonitory symptoms of cholera infantum all point strongly to a decided disturbance of the nervous sphere. Again, the remedies which have been found most efficient in controlling cholera infantum are those which act most powerfully upon the nervous system.

I may mention among the remedies that I most frequently find useful, Aconite, Opium, and Secale cornutum. I regard the last named as perhaps the most valuable one in the catalogue of medicines for this disease. Bismuth, too, is an excellent remedy. I consider that I have been very successful in the treatment of this disease, and my treatment has been founded mainly on the views I hold regarding its cause, selecting remedies mostly from those that act on the organic nervous system, and giving them in low potencies.

J. P. DAKE, M.D., Nashville, Tenn.: I have been very much pleased with the paper presented by Dr. Martin, and particularly with the distinctions he has made between cholera infantum proper and other bowel affections of children, and I consider them to be well drawn. I am quite satisfied that cholera infantum is much more rare than physicians generally think. With regard to the measures pursued by my friend, Dr. Thayer, I would be inclined to doubt their efficacy in cases of true cholera infantum, and scarcely believe that the cases that admitted of bathing in cold water and were benefited thereby were cases of that disease. I have been accustomed to see cholera infantum run a rapid course.

DR. THAYER: I wish it to be understood that I did not, and do not regard the cases I reported, as cases of cholera infantum according to Dr. Martin's definition of that disease. They were cases of the ordinary summer complaint of New England. In cases of cholera I do not use cold water.

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